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EDUCATION FOR LIBERTY

EDUCATION FOR LIBERTY

BY

KENNETH RICHMOND

Author of 'THE PERMANENT ^{VALUES} VALUES IN EDUCATION' and
(with J. D. Beresford) 'W. E. FORD: A BIOGRAPHY'

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INTRODUCTION

THIS might be described as a book of educational themes with variations. The variations are not, as the musical kind often appear to be, meant only to embroider and complicate the themes. They are rather intended, as musical variations ought at least to be intended, to develop the meanings that are latent in the themes. I have a reason, or at least an excuse, for adopting this form. The book is about the unity of knowledge, and about methods for establishing that unity; and if I treated the methods 'systematically,' in the sense of elaborating them singly, each for itself, I should not be able to dwell upon the unity which, between them, they are there to maintain.

In school practice, we have to weave the different principles of method together; and I want to present school method as it can be woven together in school practice, under the hands of teachers. And in doing this I want to carry with me as many as possible of those who, although keen to help in the educational renaissance, are as yet unfamiliar with the main principles of educational advance.

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To these, the neglected commonplaces of real education seem new and revolutionary. None of the ideas in this book are revolutionary, and I doubt if any of them are new. They do not go as far as the ideas of Comenius and Froebel; perhaps they just keep up with those of Locke and Milton, who were tentative amateurs in educational theory. At the same time the ideas that centre in the unity of knowledge are capable of working a profound and a much to be desired change; and as I believe in gradual, organic changes, I have tried to develop my themes so as to carry the majority along by degrees. The minority, to whom educational revolution is already, in thought, a thing accomplished, and in practice a thing well on the road to accomplishment in a number of pioneer schools, must bear with my Fabian methods of approach as best they may. If I put anything in a new light for them it will be an act of super-erogation; the chief need at present is to move the rank and file.

I have taken the theme of liberty for the titular motive of the book because, in an important sense, the book is about nothing else. Liberty comes of the ordered relation of parts in a purposive whole; that is what we mean by the 'free' execution of

a pianist; and it is the only thing we can mean, short of anarchy, by the liberty of the individual soul in relation to the community. There is another sense in which our liberty is simply the power to order our lives by the inspiration of that which, in my final chapter, I have called our 'superconsciousness'; that is, the power to act on impulse, *and* to be sure that it is the right impulse. But the 'and' is the crux of the whole matter. Our sense of right, upon which our liberty depends, is a social sense; it is an outcome of fellowship. Education for liberty means education in fellowship. But, for real fellowship of minds we need community of thoughts; and by community I do not mean uniformity, but interrelation. We need a unity of spirit in a diversity of minds. And we can only achieve this by teaching, and teaching effectually, that all knowledge is one. With no conception of the unity of knowledge there is no fellowship in knowledge, and no liberty in thought.

That, very briefly, is the case for the Synthetic Method in education—the method that aims at drawing knowledge into a coherent, structural unity. Not that knowledge alone is our objective; the spheres of conscience and of feeling must also be fully rounded; but at present the chief barrier

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against liberty is our unconscionable scrappiness in thought. We are all talking, and even thinking, in different languages. When we have discovered and begun to teach a common language, we shall be able to make each his contribution of free and individual thought with some prospect of being understood. A century ago, convention would have demanded that I should give a sub-title to this book. I think it would have been, 'A Cure for Cross-Purposes.'

The final chapter to which I have alluded—the one about the superconsciousness—is professedly tentative and conjectural. It represents my feeling, when I had finished the rest of the book, that the liberation of the real mind of man would mean far more than we dream of at present; but I have only been able to express that feeling in fugitive hints, seeds of suggestion, cast upon ground that is scarcely tilled as yet. This chapter has appeared, appropriately, in *The New Age*; the more sedate chapters that precede it were contributed to *The Times Educational Supplement*. I have to thank both papers for permission to republish; which done, I will ask the reader to come with me straightway, for a beginning, into the schoolroom.

PART I: NOTES ON METHOD

CHAPTER I

THE TEACHER AT WORK

THE trite precept must be put first, that anyone who expects to engage and to hold the interest of a class must prepare every lesson. We all know the rule; we all break it at times, Interest. with or without good excuse, and give in consequence either an uninteresting lesson or a lesson whose interest has an air of being imported and irrelevant—not firmly knit with the realities of the subject in hand. It is not that preparation is always necessary in order that the teacher's knowledge may be sound and his presentation accurate. The term's course that we know as an actor knows his part after hundreds of performances loses its grip in proportion as preparation is relaxed. The chief reason is to be sought, perhaps, in the attitude of mind that a teacher brings into the class-room with a well-prepared lesson. By preparing our work we put ourselves back into the position of the learner;

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and it is from this standpoint that we can best induce others to learn. Directly we have no more to learn, no fresh view to realise, upon even the simplest subject, we have no more to teach about it, if by 'teaching' anything more is meant than the mere imparting of facts.

Failure of interest on the part of a class means failure of the school's system or of the teacher's method to make the subject-matter real to the learner. A fact in itself is lifeless. Its reality for a child consists in the bundle of relations in which it stands to other facts, especially to facts of the child's own observation and experience. Thus on the primary ground of interest alone we have the strongest of arguments for a closely-woven connexion between the subjects that we teach, and between these subjects and the realities of youthful experience.

Consider our teaching of ratio and proportion, the central realisation for elementary mathematics—not to say for all mathematics and for clear thought in general. Proportion cannot be taught in the abstract—that is, as an unrelated fact. The attempt so to teach it degenerated inevitably into dependence upon mechanical rules-of-thumb, memorised, forgotten, re-memorised and forgotten

again in fruitless sequence. In answering an examination question a boy either remembered the rule or he did not; if he did, and also remembered how to apply the rule, he muddled through, but not by any exercise of mathematical thought. Clearly this would not do: in practice an Upper VI. often remained as hazy about the real meaning of proportion as a Lower IV.; so we learned to teach proportion through problems, eliciting rules from real instances, not putting the rule first and the example, arranged to fit the rule, second. This is one step towards a real understanding and possession of the rules of proportion. But our problems commonly fail to interest, because they are not real enough. No child really cares to know in how many days A can do a piece of work. It is another matter if we draw our problems, not from ready-made examples in a text-book, but from among actual questions in which the class is interested. To begin with, facts and figures from the work that the children are doing in other classes can be brought in; geography and natural science are especially prolific of interesting material. This means that the teacher has to know what the other classes are doing, and to think and plan so as to connect the interests of his own subject with theirs; and to

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invent, in our particular instance, his own problems in proportion, based upon their material. It all takes trouble, but it is trouble well expended and repaid.

Further, to stick to our illustration from mathematical teaching, problems relating to other than class-room interests can be constructed. I have found a class keenly interested in working out questions of housing and overcrowding; the material of Fabian tracts can be used (without, of course, 'teaching Socialism'); the statistics of the charity towards which the school contributed gave material for several interesting problems. The many and diverse realisations that the war has brought upon us offer plenty of problems in proportion, in the mathematical no less than in the broader sense. Monotony, which goes hand in hand with unreality as a prime cause for failure of interest, need never beset the teaching that is based upon a wide diversity of real material. Monotonous teaching often results from a conscientious wish to avoid discursiveness; there is nothing discursive in a wide range of ideas that are brought into connexion with one another through their relation to the central subject that is being taught. And the subject itself, mathematics

or any other subject, becomes real precisely in the degree to which its relations with other subjects and with life in general are established.

This is not an argument for practical as against theoretical teaching; rather, it is an argument that the two are inseparable, if abstract thought is to be alive and its practical application intelligent. I myself learned trigonometry at school without learning anything of its application to surveying or statics, found it interesting in the degree to which I might have chanced to find the solving of acrostics interesting, and forgot all its formulæ without the least difficulty until the time came, later, to relearn them in connexion with practical scientific work.

The sound and progressive interest that comes of realising a growing system of connexions between the subject in hand and everything to which it is related can very easily be marred by one of the besetting sins of the enthusiastic teacher: the sin of talking over the class's head. The teacher who has begun to realise the supreme importance of Froebel's doctrine of the vital interrelation of all branches of knowledge often forgets Froebel's correlative principle that teaching, at every stage, must be adjusted to the children's

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power of genuine appreciation and understanding. In preparing a lesson which is to be a further step, not only of progress in a given subject, but of a study in the unity of knowledge, a teacher can easily go wrong by forming a plan of connexion that is too intricate for the immature minds of his class, and then persisting in the attempt to drive his own too complex realisation home. 'Make a plan and stick to it' is a very good rule for the hitherto methodless teacher; but directly one's method begins to crystallise it is well to be aware of the danger of planning too definitely.

About principles, nevertheless, it is impossible to be too definite; and perhaps the injunction might read better in this form :—Take a principle and stick to it; plan as you go along. There is nothing more delightful about good teaching, or more sure to hold the interest of a class, than an air of lively improvisation on the teacher's part. This element in teaching is merely stimulating, not in any way nourishing, unless there is solid meaning behind it; but when a teacher has realised in what direction he intends to lead his class it adds incalculably to the interest and value of his work if he can learn, not to propound and carry out a cut-and-dried scheme, but to collaborate

with his pupils, at the stage in which he finds them at each successive lesson, in working towards an aim which he and they have together realised and desired. A common purpose, and a common effort to discover the means of attaining it, are the ideal conditions for keen and interested class work.

Even under such ideal conditions—when, it may be further insisted, the teacher does not make the lesson a monologue, but draws continual suggestions from the children—there is another danger that interest may flag. The keenest class is unable to concentrate for more than a certain time upon a given sequence of thought. It is essential for a teacher to have it quite clear in his mind what is the children's time-limit of close attention, considering their age, their degree of practice in the particular type of work, and the work's intrinsic difficulty. The need of breaking up a subject period so that power of concentration is not unduly taxed has often been dwelt upon; but the teacher's temptation to exceed the limit is perennial, when he is himself keen to bring out all that he has in mind.

There is one safeguard that is always useful. 'Children learn to do by doing,' as Comenius said; it is part of this truth that they learn to think by

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thinking; but it is also true that their thoughts need the accompaniment of action in greater measure, or at shorter intervals, than do those of grown-up people. The more the teacher can devise this accompaniment of action—of action really germane to and illustrative of the thought¹—especially with younger children, the less the interest of his class will depend solely upon the power of its component individuals to keep up the strain of unduly prolonged concentration.

I shall return to the question of action in the next chapter; meanwhile, we have to consider the art of subject presentation, upon which so much of method in teaching hinges.

There is a tendency in educational modernism to substitute for Comenius's ideal of a system by which teachers might teach less, and learners learn more, an ideal that a teacher could follow only by refraining altogether from teaching, and devoting himself solely to the creation of a environment in which children would be able to teach themselves. This is the natural reaction from a system by which teachers talk too much, and learners do, of their

¹ This is only an elementary step in the humanising of method: action can also be made creative of the thought.

own accord, too little; the development of spontaneous activity and initiative in children has been most unduly neglected, and its importance needs the fullest recognition; but it is obviously a mistake to fly to the opposite extreme and deny to the teacher his function as interpreter. The desire to find things out is one of the fundamental desires of youth, and I will consider later the importance and the place of heuristic method; but the desire to have things explained is equally fundamental—witness the ‘seven million whys’ of any healthy, inquisitive child—and it will be the greatest of pities if lucid explanation, refused by the formalist, is to be refused also by those who rightly believe in working from child-nature as it is.

Broadly speaking, presentation should be an exposition to the class of what has to be learned, how it is to be learned, and why it is worth learning. Presentation must never, at any moment, supplant the activity of learning—the definite effort on the learner’s part to come to terms with his work and to find out for himself what it really means. The presentation that usurps this essential activity of the learner’s mind is trespassing beyond its natural and useful province.

Presentation, in fact, must present; its function

is to map out the boundaries of work that is to be done, to tell the learner what he has to do, not in any degree to begin to do it for him. The keen teacher often transgresses the proper limits of presentation by explaining too much. It seems a dull, dry business merely to mark out the lines of a projected piece of work; and the only means of enlivenment appears to be an anticipation of the actual process. The teacher is thus led to blunt the spirit of enterprise and discovery in his class by rushing ahead into premature and partial explanations. The real trouble is that he has presented his subject crudely and baldly, and is trying to fill in the inadequacies of his presentation by jumping forward into that development of the subject which is the business, not of presentation, but of the systematic work that presentation holds out to the learner's ambition and imagination. Presentation must be alive, inspiring, and stimulating; but it must be alive with its own life—it must not borrow vitality from the interest that properly belongs to the later stage of detailed working out.

But how is presentation in itself, the mere mapping-out, to be made interesting? The triple definition put forward at the beginning of the last

paragraph may, perhaps, point to a clue. Presentation is too often concerned with the 'what' of learning alone; the 'how' and the 'why' are of equal importance, and of infinitely greater interest. A class can be genuinely and fruitfully interested, not only in the tract of new knowledge that is being surveyed from afar, but also in the process proposed for its exploration, and in the reasons why the exploration is going to be worth while.

Suppose, in elementary science, that work is being introduced to co-ordinate physical geography with nature study; and that the familiar series of experiments in simple soil-analysis is to be explained to the class. The teacher's temptation is to describe in advance the experiments and the conclusions that will be drawn from them; and if he does so he will rob the experiments of their experimental quality—and of their principal charm for the investigating mind of youth. Delight in the mere handling of apparatus will remain, but divorced from the real intellectual interest of inventing ways and means of manipulation and making the test declare something previously unknown. And without this intellectual interest experimental work will be a mere interlude

to thought, a substitution of doing for thinking, not a weaving together of the two.

I have just suggested, however, that the process of proposed exploration needs to be dwelt upon in the teacher's preliminary presentation. Not only the 'what' but the 'how' of the subject has to be set forth. This preliminary, explanatory 'how' must be carefully kept from anticipating, and spoiling the zest of, the investigation that is to follow. The purpose of the explanation is to prepare an attitude of mind. In our particular case, the teacher will touch upon root action in plants (already studied, we will suppose, in nature work); its importance, considering that the food-producing activity of plants supports all animal and human life; and the ways in which it is modified by different types of soil. It should be unnecessary to say that as much as possible of this presentation will be worked out by the class itself, at the teacher's instigation, through question and answer. Soils will then be considered from the geographical and geological side, with reference to the process of their formation, already studied in geography. The class realises that it is clearly important and interesting to know something about the composition of soils. How then, the teacher

asks, are we to find out? It is at this point that the temptation to summarise the coming experiments must be resisted. Rather, it is the simple principles upon which the experimental work will be done that have now to be presented. The class will ask for details, and this valuable curiosity will be promised its proper satisfaction in the laboratory. For the present the question is how a sensible experimenter approaches problems of analysis in general.

If his presentation is good the teacher will have left no doubt in the minds of the class that the whole investigation is worth while; but it is not enough for this sense to be present. It must be expressed, brought to the conscious surface. In our instance of soil-analysis the utility of the knowledge sought for is so obvious that it will be readily seen how a class would respond. The instance is an easy one, and has indeed been used here for that reason. But suppose we are considering the presentation of some branch of a subject that has no obvious utility, in the narrow sense of the term—a subject whose usefulness is its effect upon the mind and spirit of the learner. Ought not this effect, as it is hoped for by the teacher, to be explained to the learner? It is very seldom done;

perhaps on account of a very sound objection to making children self-conscious about their own mental and spiritual processes. But it is quite unnecessary, it is simple clumsiness, in fact, to make them thus self-conscious. And it is certainly an English failing, which education might do something to modify, that we know too little what we are doing with our own minds; that is why we incur the charge of unconscious humbug.

At all events it pays in practice, simply as a matter of getting class work keenly and intelligently done, if a teacher explains to children, in careful, but matter-of-fact terms, what it is that a given piece of work is expected to do for their minds. There is no need to be solemn and German in doing this. A boy who cannot as yet see the use of elementary algebra or of Latin grammar (largely, perhaps, because these things are being taught in abstract isolation from other knowledge—this is a point to which we shall return) will jump at a simple and rational explanation of the satisfaction that they offer to his mind—the one in helping him to understand relations as apart from quantities, the other in making the essential structure of language clear and definite. Children have a right to these personal explanations of the

'why' of learning; and, besides their fruit of immediate interest, the explanations conduce to right use of the mind, just as knowledge of the purpose to which a Swedish exercise is directed conduces to right use of the muscles in performing the exercise. Also, a very little experience serves to convince a teacher how greatly his method stands to gain by a consistent attempt to explain it in simple terms to his classes.

Two things are necessary before we can make real that 'quickenning interrelation of parts' in a system of teaching, that 'inner unity,' which Froebel desired. One is the drawing up
Correl- and working out of a rational scheme for
ation. the co-ordination of studies, by the head of the school, in real collaboration with the staff. The other precedent need is that every individual teacher should make a much greater effort than is usual to discover by experiment what correlation means and can do.

Correlation is essential if we are to widen our curricula—a task that has to be undertaken at this phase of educational advance, as at all others—without justifying the cry of 'smatterings.' Many subjects, dissociated from one another in

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the mind, cannot be seized and held; linked together, they can. This is the practical side of Froebel's idealistic belief in teaching the unity of knowledge. Correlation is the means for getting what looks like a quart into what looks like a pint pot. The fact that it has been made absurd by a certain type of educational dilettantism is no argument against our applying it sensibly and systematically. It is the business of every teacher to help in hastening the time of its general and intelligent application, by developing his own sense of its possibilities through practice in class work.

Most of us have the feeling at times that we are teaching each of our subjects in a closed box. The curriculum seems to be constructed, like a vegetable, on the closed cell system; it has not reached the degree of evolution at which the cells merge into one another, as in the animal economy, and a higher development of vitality becomes possible. The idea is apt to obtrude itself in moments of depression, when resource of mind is at a low ebb; otherwise it might suggest a personal opportunity rather than a reason for gloom. The individual teacher can do little to remove the cell walls that keep subjects in sterile isolation, but he can do much to make them transparent.

Consider one of the great subjects that education has to teach—the subject of language. We do not teach it: we teach languages. We teach them on different methods and with different terminologies, as though to obscure in every possible way the simple, central facts of European language-structure. It is not our fault—it is the fault of a clumsy system; but we can at least prepare for the improvement of the system by teaching languages with continual reference to one another.¹ This is perfectly easy, always interesting and, incidentally, a great help to surefootedness in different grammars and idioms. Children, like their elders, become confused between things that they have never learned to compare.

We train three faculties² in the process of teaching different subjects: power of expression and apprehension—the language faculty; sense of sequence and perspective in time—the historical faculty; and ability to see facts in ordered relation to one

¹ See p. 109, footnote.

² I know that the very word 'faculty' is abhorred by some psychologists; they are quite at liberty to murmur 'concatenation of reflexes,' or any other chosen periphrasis, whenever they come across it. But it seems a pity to throw away an irreplaceable word because it has been misused. It will be clear enough in this book that I do not regard the faculties as separable, except for convenience of statement, or as educable in separation.

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another—the scientific faculty. Thus, in a broad sense, the subject-matter of all intellectual training resolves itself into language, history, and science. These are, as it were, the three dimensions of intellect; knowledge lacks solidity in so far as any of them has been neglected.

But we are prone to neglect the language faculty when we are teaching, for instance, geography—the history and science of the earth. One seldom sees a set of examination answers in geography, or, for that matter, a set of examination questions, in which any real attention is paid to aptness of expression. Yet precisely without this aptness, this lucidity, geography becomes a hazy and an unreal thing to the mind of the learner. So with every other subject that is not directly concerned with the study of language: its reality depends upon its connexion with sensitive and accurate expression in words. The specific teaching of language suffers, in its turn, from a disintegrating influence in every lesson that is taught without regard for the vital dignities of language. In teaching geography, English history, natural science or mathematics, it is a real gain both to the subject itself and to the learner's conception of what language is if we not only take continual care of

the methods of statement that we and our pupils employ, but also refer definitely (though quite briefly and incidentally) to points of grammar and of syntax that arise. Right use of language is thus less apt to resemble the kind of religion that belongs to Sundays only.

The prevailing treatment of history is still a subject difficult to approach with any patience. I lately heard an educated man complain that in the course of his schooling he had 'learned' the Tudor period six times over; and chance is still left free—in very many schools—to break this record. Until history teaching, which is training in the sense of sequence and causation, is planned with some regard to educational sequence and causation, the teacher has an almost hopeless task in trying to inculcate a real historical sense. We ought to be teaching a consecutive scheme of world-history, a nucleus to which the various facts of development in time that arise in other lessons can be related. The individual teacher can at least keep in touch with the work of his colleagues and arrange, as far as may be, a reasonable sequence of periods, until better times come. Meanwhile, there is history in almost everything; in geography, in natural science, in the study of peoples that is

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incident to the reading of languages; and, pre-eminently, in Scripture. Indeed, it might be asserted that there are better opportunities at present for training the historical sense out of the history class than in it.

The scientific outlook is a thing that must be made to pervade all the work of a school, not the science classes alone. For a beginning, Mr W. H. S. Jones's pamphlet, 'Scientific Method in Schools,' published by the Cambridge University Press, is to be cordially recommended. It is essential for the balanced development of scientific faculty that learners as well as teachers should consciously realise that they have to apply scientific thought to everything in its degree. To this end it is useful for the teacher (I am here concerned with possible small beginnings) to make continual use of analogies and comparisons from natural science, and also to elicit these from the class, when dealing with other subject-matter. A very considerable first step towards correlation can be made by this simple process of seizing every opportunity for a cross-reference between one subject and another; and, with care that the connexions thus sought out are true ones, it is surprising how immediate is the gain, both in interest and in the comprehension of root ideas.

The processes of correlation are easy; indeed, they grow almost of their own accord, once the will is present and an attempt to rediscover the way has been set in train. But this ease of process can be a fatal ease if an underlying difficulty is not squarely faced; the difficulty which a teacher, trained in the pigeonholing of knowledge, must himself experience in trying to see and to teach knowledge as a whole. It is fatally easy to play at correlation in a lazy-minded way, producing a slovenly misconnexion of ideas even worse than their sterile separation. It is incumbent upon the teacher to raise himself to a view-point from which he can see the true connecting paths that intersect the fields of knowledge. Our description of knowledge as consisting in three interrelated activities of thought—language, history, and science—may suggest one way of acquiring the synthetic attitude of mind. (It may be noted that we are not now considering the æsthetic activities of the mind; it is the intellectual activity that separates and subdivides knowledge, and then too often neglects its correlative duty of re-combining the realised parts into a new and a fuller unity.)

The teacher who makes a conscious effort in his own studies to see language as a whole, to

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realise the history of language and the science of language as aspects of a single reality, will find that it comes naturally to him to teach separate languages as parts of that whole. By studying world history and teaching ourselves to realise the great sequences on a wide and comprehensive scale, we can learn also to apply the historical sense in every region of thought where it belongs —and learn further, it may be, the futility of teaching a patchwork of disconnected periods. Our prevailing treatment of history could not long survive a general recognition of its wasteful scrappiness. And to study science as a whole, carefully tracing its connexions with every department of life, is inevitably to broaden both one's outlook and one's method in teaching. Such a course of study, though not in practice so formidable as it might at first sight appear, is a serious undertaking; but it is worth while. In failing to co-ordinate while we specialise, we risk losing our citizen rights in the empire of thought and becoming mere dwellers in the provinces. It is our business to teach the unity of knowledge; and it is our plain duty to learn ourselves to comprehend that unity more and more completely.

CHAPTER II

THE ACTIVITY OF THE CHILD

THERE are two arguments in favour of teaching children to work of their own accord : the one may be described, not in any derogatory sense, as the sentimental, the other as the practical argument. Of the sentimental argument Spontan- eity. we have perhaps had a sufficiency—some would call it a surfeit. The practical argument is that resource and inventiveness are highly valuable, and that like any other faculties they need practice for their proper development. Unpractised in class work, the inventive faculty not only develops the less fully, it also develops outside and apart from those wider interests of the mind which it is the business of class work to foster. The resourcefulness of the public school-boy, developed principally in games, has proved to be of magnificent value for war, particularly in the multitude of small tactical problems. The tasks of peace will demand an equal resource-

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fulness, differently applied : essentially the kind of resourcefulness that can be, and should be, at work in the class-room, superadded to that which develops on the playing field.

Just as initiative of mind should not be kept out of the class-room in general, so it ought not to be dissociated from any department of work. Initiative is one of the major faculties of man, and any work in which it is left dormant will be the less real to the learner. Training of initiative bridges the too common gap between knowledge of what should be done and readiness to do it.

In mathematics, for an example, the chief cause of failure to realise the bearings of a problem (and of subsequent failure, in life, to view questions of quantity and proportion intelligently) is a certain inertia of mind. There is one way in which we conscientiously encourage this inertia. One of the commonest prohibitions drilled into mathematical classes is, 'Don't guess.' We are quite right in wanting the class to extract the 'answer' by the best and shortest process. But the child's impulse to make a preliminary guess is backed up by the practice of all experienced mathematicians. The mathematician's guess, however, is approximately right; the child's is often wildly wrong. Is the

only remedy to eliminate the guessing process? We are beginning to learn that children also can acquire by practice the power of guessing approximately right—and that they handle the working out of process that follows very much the more intelligently for the exercise. The crazy rigidity of modern Germanism comes largely from the elimination of intelligent guessing, so that thought is wholly subordinated to mechanical logic.

The first important thing is that the guess should be proclaimed and tested before it is acted upon. The best plan is for the whole class to join in a spell of competitive, or rather co-operative, guess-work, the teacher criticising any suggestion only when none of the class can see what is wrong. A second point of importance is that the boundaries within which the eventual 'answer' must fall should be clearly and consciously realised. A third point of even greater importance is that the limitations of the data, before actual working out has been done, should also be clearly stated. The class must realise distinctly both that the solution can be correctly guessed within certain bounds, and also that within those bounds there are definite questions to be asked and answered before the

guess can be refined down to complete accuracy. (In other subjects than the exact sciences of mathematics, formal physics, and so forth, when the 'answer,' the result of the investigation, can only be approximately accurate in any case, it is important to state expressly what the final, unavoidable limitations are.)

The right use of guesswork is really at the root of training in spontaneous initiative, because guesses, approximations, are the pupil's only contributions to class discussion. It is the teacher who determines, or at all events ratifies, all the certainties. The modern teacher knows that he has to lead his class in search of conclusions, not to impose his own certainties ready-made; but there is sound criticism in the old-fashioned objection that the modern teacher imposes his own certainties quite as dogmatically as his predecessors, only by a more roundabout method. Heuristic method is really a fraud if the end is fixed; and what is more, children very well know it to be a fraud. At the same time, the end must be fixed if class method is to be anything but a continuous digression from a line that does not exist. The dilemma is education's share in the philosophic antinomy between determinism and free will.

The solution, as a previous paragraph has suggested,¹ lies in a combination of fixity of aim with fluidity in the method of approach. Presentation, rightly conceived and carried out, should give to the class a distinct consciousness of the end to be aimed at; there must be no pretences that the children have arrived wholly of their own accord at the end which the teacher, in reality, has secretly prepared for them from the first. This is an intellectual dishonesty; and children are conscious of the fact, even if they do not clearly express it to themselves. It gives their work a sense of unreality which results in boredom. But if the teacher makes the end clear, bringing out also its desirability, and then deliberately leaves the means, in large degree, to the inventiveness of the class, he has then called up a real impulse towards spontaneous activity. He has put the class into the position of the would-be solver of a riddle who cries 'Don't tell me!'

The word 'guess' has a bad name in the classroom, and the point ought perhaps to be insisted upon that there is guessing and guessing. The one is an exercise, the other an avoidance, of thought. The remedy for the guessing that comes of laziness

¹ p. 12.

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is not suppression, but encouragement of the guessing that comes from keenness. Lazy guesswork usually comes of individual inertia of mind or lack of interest; it is in its essence selfish. The encouragement of collective guesswork, in which each individual is stimulated by the competition and criticism of the whole class, gives real training in spontaneity of thought. There is still a danger that the guesswork may be merely aimless and silly; but this it is the teacher's business to obviate. If he has made the aim of the work clear, every child has a ready criterion between the sensible and the foolish guess; and if the class as a whole is conscious of the proposed direction, its members will be restrained by the general sense from irrelevant by-paths.

Spontaneity of mind, then, is best fostered by the encouragement, through deliberate training, of sensible guesswork; that is, of the faculty of the mind which reaches out and lays down preliminary working hypotheses. This is the reduction to its simplest terms of spontaneity in thought; and it has to be followed by spontaneity in action.

Our distinction here is not between mental and

physical activity, but rather between the two faculties of prevision and of realisation. The activity which realises a hypotheses, usually modifying it in the process, may consist largely in physical doing, as in the verifying of a reasoned scientific guess by laboratory experiment; or it may be wholly mental, as in that valuable method for history teaching by which a class first considers what people are likely to do, given their characters and circumstances, and then tests the forecast by seeing what they actually did, and to what extent new and unforeseen circumstances arose to modify their decisions. In the former case, that of laboratory work, it is easy to see how we can carry out the general principle of making the child the doer; in the case of comparing the fact with the forecast in history, and in many like cases, it is more difficult to see how the teacher can do anything but simply communicate the known facts. The weak point of any endeavour to make the children seem to discover the facts for themselves is that it is only a seeming—a fraud, of the kind which children always inwardly resent.

The fraud ought never to be perpetrated; the things that a class has simply to be told, by the

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teacher or through the reading of books, are best told as simply and straightforwardly as possible. But the mention of books suggests an important point of method by which children need seldom be merely the passive recipients of facts. Take the instance of a chain of definite historical events; the class has worked out a reasoned guess as to what these are likely to be, and has next to realise, simply, what did happen. Let us suppose, first, that a senior class is in question. The reading of short passages from two or three different historians makes it clear that there are discrepancies of opinion, or at least of proportionate statement, as to the facts; and here active criticism and discussion come in.

This is a commonplace of advanced history teaching, but it is equally applicable to more elementary work. Writers such as Froude and Macaulay cannot be critically studied by young children, but accounts and opinions drawn from contemporary sources can be read to or summarised for them, and the characters and motives of the narrators taken into consideration. The extra trouble for the teacher in looking up the real sources of history will be repaid by a striking increase in the interest of his teaching; and no class

old enough to study consecutive history at all is too young to begin to learn how closely the comprehension of history is bound up with the science of sifting and criticising evidence.

A point of detail: it is distinctly useful, after considering two or three accounts of an historical event, to let individual children imagine themselves in the shoes of different characters concerned in the event (not forgetting the humble townsman or peasant), and describe how the event would have presented itself to, or would have been garbled by, each chosen character.¹ The class, alert to notice any point in the recital that is not in keeping with the assumed personality, gains a valuable sense of that interplay of personalities—with their ambitions and prejudices, their varying degrees of knowledge or of ignorance—which explains so much that is otherwise tiresomely illogical in history.

A more general application of the method for which this treatment of history supplies an instance may be drawn from a consideration of language and expression. Expression in words is a definite

¹ This can well be made a stepping-stone from ordinary class method to the dramatisation of historical incidents.

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function of thought; we all recognise that our notions and opinions become clarified by expression in words—not merely as the result of expression, but in the actual process. It is a necessary corollary of this fact that the process of expression ought never to be taken out of the hands of the class by the teacher; he must never take over the business of formulating ideas because he can do it better than his pupils. That is precisely the reason why he should give them as much practice in formulation as possible.

It is a useful general rule in teaching to express nothing oneself which the class is capable of expressing—however imperfectly and obscurely—until the class has done all in its power to produce and perfect the expression. Then the teacher can sum up and give his completer, more lucid, formulation to hearers who are keen to see their own 'prentice efforts surpassed. To explain things completely and tidily to children who are themselves capable of explaining them partially and raggedly is not to satisfy but to thwart their real desire for expression. When the class has said its say, leaving, no doubt, many loose threads of expression hanging, then and not before is the time for the teacher to step in. It is then his business (and it is an

exacting enough business) to weave the loose threads together, to produce for the expectant class the comparatively complete formulation that the children's own efforts have led them to desire. The teacher's chief comfort, indeed, will be that his final summing-up need be only comparatively complete in order to give satisfaction. He might have given a broad and free *résumé* of the main heads of the subject, entirely satisfactory to himself, before hearing what are the points which the children desire to have settled; after the class has spoken, his task of formulation appears to be redoubled. But it also appears, without illusion, to be many times the more worth while.

There is another way in which the natural desire of the young mind for activity may be given its proper satisfaction. Children take a delight not only in expressing their developing thoughts about realities, but also in devising activities to represent or to symbolise realities. This valuable childish tendency (it is strong in many young people who would not like to be called children) is, probably, a germinal manifestation of the artistic faculty. The teacher can give it scope by encouraging every kind of model-making, from the dramatisation in class of a historical event, in effect the artistic

reincarnation of the event upon a childish scale, to the concrete model-making which has become almost a fetish for the modern geography teacher. This model-making activity has perhaps been a trifle overdone by the modernists, especially in the concrete region; but in its proper place and proportion it is highly useful, and the teacher who is trying to do his best under a formalist dispensation can scarcely overdo it. In any case, childish imaginativeness is better over-expressed than kept under; it is a force of nature, and must come out either in right ways or in wrong.

The members of a class have two positive inducements to work keenly, besides the intrinsic interest of the work and their desire for credit and approval. One is the stimulus of competition; the other is the ambition, **Self-** not to excel others, but to excel oneself. **emulation.**

While admitting that the competitive spirit has its use and value, we can hardly doubt that the spirit of self-emulation produces keenness of a higher order. The competitive instinct is one of the primordial, evolutionary instincts, and it needs training in education not so much that it may be fortified as that it may be taught its

manners. The public school system at its best inculcates friendly, sportsmanlike rivalry, not only in games but work, and this is a very excellent thing; but it is not everything. Merely from the point of view of practical education for life, competition is only a conditional and a relative inducement to well-doing. In the carrying out of the world's work the stimulus of competition is not always present; and even if it were, the best work is not that which is done for any ulterior motive, but that which is done, first, for its own sake, and, second, for the satisfaction of beating one's own record.

All children have the desire to surpass their own previous best, and most teachers make a more or less conscious attempt to foster and develop this instinct; but all the tangible machinery of marks, prizes, and class promotion leans towards the prior encouragement of the more elementary competitive instinct. There is a real need that we should consciously define our method of encouraging self-emulation.

Perhaps the first thing to realise is that the criterion of a child's advance must be in the child's own mind; the verdict passed by the teacher is by no means the same thing. We have to train,

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by trusting, the child's sense of what he can do, and to invoke his own judgment, not only our own, of when and whether he is 'really trying.' Most classes have to rely far too much upon an arbitrary standard of industry and achievement imposed by the teacher; and the teacher's minimum demand tends to become the class's maximum response. No child is being educated who is not being taught to set up for himself and to apply his own standards.

This is one of the principles that are fairly easy to carry out in practice once the need for doing so is fully realised and kept in mind; but it is not so easy to make definite suggestions in print for method to this end. In any case it is more a matter of mental attitude than of detailed method; and the steps that can be taken depend very largely upon the size of the class and upon other considerations that vary widely with different school systems. But one point of practice is applicable in all cases, a point that has already been touched upon in connexion with subject-presentation. It was there suggested that a teacher should explain to children the programme of work that he intends to set before them, and should secure both their interest and their co-operation in that which is

being done with their minds. It is a mistake on many counts to keep children in the dark as to the process and purpose of their education; they fail, in the measure of their unenlightenment, to learn the most important lesson of all, how to educate themselves—most important, because all real education is self-education. And certainly they fail to learn self-emulation in proportion as they are kept unconscious of process and purpose in their work.

Suppose a particular point of grammar to be under the consideration of the class; it may be the distinction between nouns, verbs, and particles in elementary English, or, say, the use of indirect speech in Greek or Latin. Essentially, there are two attitudes that the teacher can take up: he can say in effect, 'This is what you have to learn'; or, 'Here is something which, by working at this, you will become able to do.' By the one attitude the mind of the class becomes fixed upon the task—often in considerable boredom, since the task is often quite uninteresting, merely in and for itself; by the other, attention reaches through the fact of a thing that has to be done to the idea of a power that is to be gained. Then the question in the mind of the learner becomes, 'Am I gaining this power?'

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—a question which the teacher will find it of the greatest use to emphasise at every step. Every bit of good work should be made a matter of congratulation, not for the thing done, but for the amount of faculty attained; and—this is important—the gain of faculty should be consolidated by plentiful exercise of an interesting and an entertaining kind.

In our grammatical instance, the moment when the particular distinctions or rules have been mastered is not the moment to turn to the next stage of the subject; that is the way to ensure that the present realisation will be dropped to make room for the next. The new faculty must be used; and there should be pleasure in its use. For instance, in our more elementary case, the teacher can try to 'catch out' the class over the distinction between nouns, verbs, and particles as they occur in some short, amusing story, and the game can be continued for as long as its attraction lasts—that is, until the children have thoroughly learned the use of their new scrap of mental power; in the case of *oratio obliqua* a similar procedure can be followed, using a large number of easy instances, not in too serious a vein. This provision, in class work, of a recurrent phase of comparative relaxation for

the pleasurable use of a newly-gained power, obviously has other advantages as well as the fact that it makes the learner fully conscious of something acquired—in the words of Locke, that it ‘lets him see by what he has learned that he can do something which he could not do before.’ It is a rhythmic release from the over-concentration which we have to avoid; and it is a form of release that is not merely negative, but has content and value of its own.

The full realisation of stages of advance as they are achieved can develop a collective self-emulation by the class as a whole, as well as a consciousness in the mind of each learner that he is continually and enjoyably surpassing himself. The teacher’s attitude towards the individual learner will also have a profound influence upon the learner’s position as a being engaged in an interesting competition with himself. It is always useful to point out to a child, in praising him for good work, in what definite respect he is further on than he was before, or to make it the main charge against a piece of idleness or careless stupidity that it is sheer waste of the power acquired by previous good work. This is an argument that seldom fails of its effect, if care has been taken beforehand to

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develop the child's interest in his own accumulating powers. Children work their best for a teacher who sees them, and leads them to see themselves, always as standing a step higher in virtue of the work that they have just done, and as standing, potentially, a step higher still because of that which there is next to do.

CHAPTER III

'PROGRESS'

THE idea of self-emulation, or the conscious desire to surpass one's own previous best, is closely bound up with the idea of progress—the sense of 'getting on.' It is important for the teacher to recognise and face the uncomfortable fact that there are three very different ideas of what progress is and means : besides his own idea, there is the parent's idea, and there is the child's idea. It is our business to bring these three ideas into a unity, as far as in us lies. And since fusion of ideas is chiefly gained by getting rid of that which is wrong or unnecessary, it may be useful to consider what mistakes are prevalent in the notions of progress in education which are held respectively by teachers, parents, and children.

Broadly speaking, we may say that the teacher's criterion of progress is apt to become centred overmuch in scholastic 'results'—marks, prizes, promotions, and general conformity to the standard

of the school merely as a school, without reference to the wider standards outside and apart from school life. It is these wider standards that the parent wishes to take into account; but the average parent tends to view 'life'—that for which his child is presumably being prepared—as something not wider, but narrower, than the life of the mind and spirit which education exists to encourage. A majority of parents still look upon education as equipment, as means to an end which is merely the struggle for life; 'life' in this sense being viewed in terms of quantity rather than of quality, of income rather than of intellect and character.

The child, meanwhile, falls between two stools. He wants to 'get on'; that is the desire of all vital organisms; but scholastic progress is usually too dry and academic for his taste, and the notion of carving out a career for himself in the grown-up world is (perhaps fortunately) too remote from the concerns of childhood to engage more than a passing, speculative interest. He therefore becomes chiefly concerned, to take the average case, with his status in the little school democracy, apart from those irresponsible autocrats, the teachers, and their standards; apart also from that other standard of the businesslike parent who will expect business

results some day. Some day, for a child, is an infinite distance ahead; and, meanwhile, his idea of progress is an idea of raising himself to a position of respect among his fellows; respect for proficiency in games, for fortitude in enduring the slings and arrows of outrageous teaching, and for that general cheeriness which is not the least respectable of the qualities that can be developed by school life.

The teacher cannot deal directly with the parent, but only with the child, and our problem is to modify both our own and the child's idea of progress so that ours may become less mechanical, and his less bounded by the small concerns of school life—so that both, in fact, may become less scholastic, more nearly in touch with real life, the life which the parent knows that his child must learn to understand, though the parent's crude expression of that knowledge may often seem to us unduly businesslike and materialistic. Our task is to make real to children (and, perhaps, to ourselves) the affairs of the outer world; to begin, by our own individual efforts, to break down the barrier of artificiality that separates school work from reality. One thing may be said at once; it is not our business to teach materialism, and to neglect the concerns of the intellect and the spirit. That is not the

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way to reality, but to unreality. Our business as educators is to make the purpose of life plain, so far as we can understand that purpose, not merely to expound the mechanism of life. If mechanism were all, commercial colleges would have it, and ought to have it, all their own way.

It is a common mistake of modernist education, particularly in America, but also over here, to dwell too exclusively upon the materialist side of things, and so to give the formalist undue cause to blaspheme and to declare that he alone upholds the verities. We have to teach the connexion between school 'subjects' and the concerns of the world outside and beyond school life; but we must not teach that connexion only upon the material plane.

In geography, for example, how much do we teach about commercial imports and exports, and how much about the matter that is now exercising all our minds so deeply—the importance of racial character as a determining principle of nationality? Or in history, when we talk of past wars, how far do we review them in terms of material gain? Such questions really affect the main problem, whether we are giving to our classes a real or an artificial idea of that which we call progress. Or,

in the teaching of science, are we dwelling principally upon the commercial advantages of knowledge or upon the satisfaction of truth pursued for its own sake? The one inducement will leave a child fundamentally discontented, the other will awaken his latent enthusiasm for the truth of things. In the study of language, again, are we dwelling upon the use or upon the human interest of an acquaintance with the different speech-forms? The use is only the incidental value; the interest is the real value, which will in due time give the use an opportunity to explain itself.

There is no progress but progress in the real concerns of life, and these are neither scholastic nor commercial. Even in individual progress fellowships and directorships are only the incidentals. Our daily round of class teaching must depend upon an idea of progress that is different from the ideas of academic and of commercial advancement. The nature of childhood expects something else; it desires the truth of things, and only in communicating an idea of truth which is apart from scholastic status and from commercial standards can we give to children the real sense of progress that they desire—the sense of a continually widening grasp upon human reality.

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It is all the more necessary for the teacher to encourage this sense, because the existing machinery of schools has a blind tendency in the opposite direction. At the same time, it is necessary for him to take this tendency into account, and to see what he can do to counteract it.

The notion of progress in a school finds concrete expression through a system of marks, prizes, and promotions; the apportionment of marks alone is the sole responsibility of the individual Marks. teacher, and it may be worth while to consider how this small, particular, autocratic power ought to be wielded so as to express for the class as justly as possible what the Olympian standard of progress really is. This is to put the problem on its lowest level; marks ought also, if they express anything real at all, to satisfy the democratic sense of the class itself—to represent for children their own sense of justice and of comparative merit.

Some teachers (*quorum pars*) are inclined to think that marks do not give a satisfactory indication of progress, because they attempt to express qualitative values in quantitative terms—always a forlorn enterprise; but our remedy is not to

rail against a system which we cannot by ourselves change, but to do everything in our power to turn a bad system into a better. If we succeed, we work an organic change; if we fail, having done our best, we have demonstrated the absurdity of the system.

The conclusion suggests itself at once that marks ought as far as possible to be allotted not by a direct and arbitrary decree of the teacher, but upon some system known and understood by the class. To get ten or fifteen or twenty marks, on unexplained grounds, as the result of a given forty minutes' work is not to develop any individual sense of the difference between good work and bad, but only to develop the habit of referring all judgment as to the quality of one's work to another standard than one's own. And it is very necessary in education that children should learn to form their own standards. No system of marking can do anything to develop in a child the important faculty of self-criticism which does not to some extent make him and his fellows the censors of the marks that he acquires.¹

A teacher of my acquaintance used to divide

¹ Since this was written an interesting experiment in democratic marking, in connexion with other methods of self-government, has been described by Mr J. H. Simpson (*An Adventure in Education*, Sidgwick & Jackson, 1917.)

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the marks that he gave for essays equally under five headings: Matter, Style, Grammar, Spelling, and Writing; and the process proved useful in helping children to understand an elementary analytical criticism. It has been found an interesting extension of this plan to let every child go through his neighbour's essay and mark it under the five headings, appealing to the teacher upon any doubtful point. This is done in pencil; the teacher then revises the corrections and the markings in the official red chalk, and at the next lesson the essays are returned first to their revisers, and then to their authors. This procedure has the incidental result of making children much more ready than any amount of exhortation can make them to give adequate revision to their own work before it leaves their hands; it goes without saying that the teacher will be able to find mistakes and flaws, but they are keen to make sure that their fellow essayists shall find as few as possible.

Variants of this method can be devised for many forms of written work; in oral work an adaptation can be introduced of a method that used to be employed in class work by the present Reader in Education at Oxford. Every member of the class begins the lesson in possession of five marks.

(The psychology of this repays thought.) Every satisfactory answer to a question wins an additional mark; an exceptionally good answer wins two. An answer that is only partially right leaves the situation unchanged; not to answer, or to answer quite wrongly, is to lose a mark. The criterion of success in answering is to have satisfied the rest of the class; any child can question the validity or meaning of an answer, often with the result that the objector displays some failure to comprehend the point at issue, a failure that would not otherwise have come to light. The clearing up of such misunderstandings should, of course, be left as much as possible to the children themselves; it is a valuable exercise for their powers of statement. The children keep tally of their own marks upon slips of paper, in each other's view, or, if authority is kind, small note-books can be kept for the purpose. Ten is the highest mark to be recorded in the teacher's mark-book, and to gain more than ten is to display the virtue that is its own reward. In practice great keenness is apparent to do better than the best in this way. Zero, similarly, is the minimum; minus quantities are 'given up,' but not recorded. They indicate a subnormal condition which it is the teacher's business to

CHAPTER IV

COLLECTIVE DISCOVERY

THE philosophy, or the rule of life, which Miss Harrison has so engagingly set out in 'Alpha and Omega' under the mock-serious title of 'unanimism,'

Unan- has always been one of the boasts of school
imity. life. We take pride in the unity of spirit that pervades a good school. But we are

perhaps too ready to be complacent over the fact that the tone or spirit of a school is largely atmospheric and indefinable, with its consequence that we have only the vaguest of notions how such a spirit is built up and maintained. We cultivate, too blindly, a unanimity of feeling to which we give little or no 'stiffening of thought'; with the consequence that the spirit so nebulously realised at school degenerates all too easily, in later life, into a dead convention. The practical remedy, surely, is to establish a closer relation between the 'tone' and the intellectual life of schools; and this

is a task in which every individual teacher can bear a hand.

Simply from the point of view of class teaching, the collective mind that a group of children brings to bear upon a problem of work ought to be the same collective mind that is brought to bear, half consciously, upon questions of sportsmanship and good form. We need, in class, the attitude of mind that will tackle a knotty bit of thinking in the sporting spirit (a boy often sighs 'Oh, I can't I' in class who has plenty of the courage that makes it easy to drop on the ball when a mass of opposing forwards are making a rush near to his goal-line); we need also, instead of a feeling of shame over any attempt to express an idea by a true and workmanlike turn of phrase, a feeling for style at least as sensitive as the common concern for correctitudes in out-of-school slang—a concern not by any means to be deprecated if the slang is that light essence of easy wit and good humour which it is in all well-conducted schools. Both courage and style are no less valuable in school hours than out of school; and it is our business to make these values clear by our methods in handling subjects and presenting them to the collective minds of our classes.

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It is worth while to insist that every class has a collective mind, a collective sense of intellectual courage and of intellectual good form, because we are still prone to treat these faculties as though they resided only in the individual. It is a great mistake to regard class teaching as something similar, but inferior in effectiveness, to individual coaching. There is too much talk about 'individual attention' as the basis of the plea for smaller classes; a class of fifteen has one, perhaps the most educable, type of collective mind; a class of thirty has a mind more difficult to treat as a whole, but still educationally possible; a class of sixty has a mind that seems, at times, almost ineducable—one might as well try to teach a megatherium. Too few is as bad as too many; there is practically no collective consciousness to which the teacher can appeal in a special 'division' or 'set' of four or five children. The intellectual unanimity of a class that numbers more than ten and less than twenty is something worth having, and worth educating; beyond twenty, even, the class has exceeded the ideal number, and below ten it has begun to resolve itself into a mere group of individuals. Group-consciousness is always at its highest when there are either just enough or just

not too many to make the group, as a whole, conscious of its own best.

The large majority of us are obliged to teach classes of such a size as to be amenable to instruction rather than to education, in the sense in which these terms are commonly opposed to one another; and it is a sheer impossibility to bring out that individual spontaneity which we have considered in an earlier chapter, except in the most elementary ways. It thus becomes all the more essential to encourage collective spontaneity, a unanimity that is something more than a mechanical code imposed in the interests of quietness and order. Witness the fact that some teachers can get better work out of an apparent pandemonium than others can achieve with an entirely docile class; it is not that indiscipline is good, but that a lifelessly mechanical discipline is worse—even in its immediate results. The ideal class is both quiet and alive, but its life is more important than its quietness.

Take the instance of general discussion in class, invaluable, when properly handled, for inducing vitality and alertness. It is practically impossible with an over-large class, if only for the reason that a class of sixty makes four times as much noise

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in the process as a class of fifteen. But it is a useful plan to subdivide the class for a time into groups of four or five, and to allow quiet discussion within each group, its questions or suggestions being made public and thus referred to the consideration of other groups by a temporarily appointed spokesman. As a substitute for general discussion this method is less cumbrous in practice than it would seem. It is also useful at times to set these groups working at different parts of the same realisation. I will return to this point in a moment.

In treating a large class simply as a whole, as is necessary at any rate during a considerable part of one's time, the only way to arrive at the self-expression which the collective mind of the class needs for its development is to engage the interest of the children in overcoming the inevitable difficulties. The class has to acquire a technique of self-expression, and the more cumbrous its size the more strict and mechanical this technique has to be—the greater the measure in which the keen individual child has to exercise self-repression. If it is the teacher who has to repress the child's tendency to do more than his share of the talking, the result is apt to be that the child's keenness

is repressed along with his communicativeness, and gives place to the apathy so often to be noticed in over-large classes. But if the children can be led to recognise (as they can by degrees) that because the class is a big one everybody must learn to sift and choose his own ideas carefully and express them, in question or answer, as shortly and plainly as possible, a positive gain can be snatched from among the inevitable losses in freedom and vitality. It is not natural to a child to revise and edit his thoughts before utterance, and the ability to do so can only come by small, slow steps; too much must not be expected at once. But in gradually learning to think before he speaks, not only because it is a good thing to do in itself, but because speaking shortly and to the point gives others their fair chance to speak too, a child gains an object lesson in one of the important factors of social life. Even a large class, in which the children are learning deliberately to restrain all but their best contributions to discussion in the interests of their neighbours and of the class as a whole, is developing a collective mind whose unanimity is of real educational value

A great deal of time is commonly wasted in

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class over the endless reduplication by children of the same mental activity. It is very important to distinguish this time-wasting reduplication from the essentially different process by which we deliberately encourage children to repeat, for practice, a given action of the brain. This is the inculcation, not the reduplication, of a method of thought. Repetition, here, has a purpose; it grooves a track, as it were, in the mind, a channel through which thought may subsequently run with ease. It has already been suggested that every realisation by a class of a new mental process ought to be at once followed by plenty of easy and enjoyable practice in the exercise of the new faculty; the 'brain-track' has to be established, and used with a certain sense of vital enjoyment, if the realisation is not to be lost, crowded out by the next aspect of the subject in hand to which the attention of the class is turned. How many classes in natural science, for instance, fully realise and know how to apply the quite simple principle of natural selection? And how many have been given a sufficient range of interesting problems and instances for due exercise in the application of that principle?

Of quite another order is the useless and uninter-

esting repetition of an act of the mind which has become thoroughly familiar, and is applied to subject matter which is also familiar—not to say boring. Even as many important and fundamental acts of the mind never become easily habitual because their practice has been neglected, so many unimportant and superficial mental processes are repeated to the extremity of tedium because the mechanism of class work seems to make this unavoidable. The looking up of words in preparing for Latin translation is an instance that springs to the mind, and an instance which I will examine further in a moment. It may first be noted, however, that there is one argument—it appears to be the only one—which favours vain repetitions of elementary mind-processes. A great deal of elementary and mechanical brain work has to be done in the world; and until it can all be done by calculating machines (as the casting of accounts is now largely done in some business houses) we ought not to bring up a race of superior persons who will refuse to do it. But experience in cutting out avoidable reduplication of process in class work goes to prove that there is an irreducible minimum which is quite as much as the human child can manage without total loss of

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interest; and, on the question of principle, the race needs a reasonable amount of rebellion against needless drudgery. That has always been one of the mainsprings of human inventiveness, and a prime factor in the development of civilisation.

We have touched upon the type of machinery which is beginning to replace the duller forms of mental action at the decree of the business sense: the calculator, the cash register and so forth. Other mechanisms, of a higher order than the material, have their essential place in civilised development.

Co-operation, the fundamental basis of civilisation, is at once an intellectual and a physical mechanism. It is the machinery of fellowship. It is also a drudgery-saving device, and it can be used as a drudgery-saving device in class work far more than it commonly is. Take our instance of Latin translation. A certain headmaster, feeling that there was something stupid and unnecessary about the slow grind of getting a class through a Latin book, tried the bold experiment of setting only a few passages here and there, chosen in virtue of special literary or grammatical interest, for preparation, and taking the class through the greater part of a book of Livy unprepared and at

four or five times the usual speed. At the end-of-term examination the class showed a very much better acquaintance with the book as a whole and in detail than had ever been effected by the old method. Such is the result of giving children a chance to see the wood for the trees. To this method another experimenter added the cooperative principle, as follows:—

The class was divided at preparation time into couples, and a long passage from the Latin book was divided into a corresponding number of sections, one section being allotted to each couple, for preparation. In the ensuing translation lesson, supposing the couple A and B to have prepared the first section, sometimes A and B were given that section to translate; at other times another couple, say M and N, would be 'put on.' In the latter case M and N who, of course, were translating 'unseen,' had their efforts supplemented or amended first of all by any other members of the class who also had not prepared the section—A and B being referred to only for points that no one else could elucidate; the teacher remained in the background as a final court of appeal. This method also resulted in examination papers that showed real grasp both of the book's content and of the

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points of grammar and construction which had been studied ; further, it seemed to produce a levelling up in the standard of keenness and effort and an elimination of mistakes of the silly, apathetic type.

It will readily be seen that the method can be applied to other subjects besides the one instanced here. In laboratory work, to take another instance as different as possible, it is very profitable to set children to work in pairs, at diverse experiments which all illustrate the same physical truth, or at different parts of one large experiment, the data obtained being subsequently discussed and collated in class. Co-operation, not only within a single class, but between one class and another, is an extension of our theme, but this has already been considered in part under the heading of 'Correlation,' and will reappear in a later chapter, for consideration in another aspect.

It is an important feature of modern method to make the child the discoverer of knowledge, in so far as discovery can be made for him a genuine and a useful reality. I have touched
Discovery. upon a common flaw in heuristic method : the fact that the discoveries are often prearranged by the teacher and are

essentially frauds—a fact which children are apt to realise and resent, whether or not their resentment is consciously expressed.

An extreme case was that of a teacher who 'faked' the distillation product that had been made by his pupils during one laboratory lesson, in order that at the next lesson the test to be applied to it might show a convincing result, and was found out by a boy whose father was a scientist, and who knew that the result obtained was much too good to be true. This we may well hope, is a far from typical instance; but there is a subtler, intellectual 'faking' of the material for which it may stand as a crude example. Many teachers, when they are preparing a lesson supposedly on the heuristic principle, are chiefly preoccupied with the idea of making sure that a satisfactory conclusion shall be 'discovered,' rather than with the determination that the process of childish discovery shall be, before all things, honest. But this is exactly the way to undermine, unconsciously, the intellectual honesty which is native to childhood. Also, it creates a false idea of research by minimising the inevitable difficulties and uncertainties inherent in the nature of research. The frequent imperfection of data, and the limits of accuracy in conclusions drawn from imperfect

data, are intensely important questions in real life; and children whose 'heuristic' work always leads them to the certainty of a prearranged conclusion are learning to neglect these questions.

It is only by taking a very narrow view of the adventurous impulse in the human mind that we can expect children to be satisfied only with a quest that ends in a certainty. The present desire for scientific method in schools will come to little if we mean by science nothing but the ascertaining of facts. A higher function of science, whether we speak of the science of physics or of the science of translation or of historical evidence, is to frame and limit hypotheses and to use them rightly.

Take the very simple case of arithmetic—in itself an 'exact' science. We are all prone to credit without much examination any statement or argument which is presented with the apparent backing of cold figures. We have been trained to regard questions of arithmetic as being concerned with certainties. A sum is either right or wrong; the sums that are worked out by statisticians are right; and since the figures are right we are unready, through lack of training and habit, to inquire whether they are also being rightly applied to the

argument. Heuristic training in arithmetic could do much to modify this defect in a single generation, but it will not do so if the method of discovery, like the method of rule-of-thumb, is to end in the notion that arithmetic is concerned only with exactitudes. We have begun to pay greater attention to approximations in the teaching of arithmetic, but we are doing little or nothing to teach the interpretation of figures when they have to be applied to the clearing up of an ambiguous set of circumstances. A similar neglect of the ambiguities of real life is to be noticed in greater or less degree about our handling of every school subject.

An objection rises to the mind that the study and delimitation of uncertainities, the framing of working hypotheses, and all such higher flights of the discovering mind, are too difficult and discouraging for children. About this there are two things to be said. The beginnings must be very simple; but they must be made early. The power of seeing probabilities in relation to, and in proportion with, one another, and of forming balanced judgments upon them, cannot be built up at short notice.

And discouragement disappears when discovery

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is made a social rather than an individual concern. When the quest of the class is not for a certainty, but for a reasonable approach to a probability, and individual members of the class are all working at the same fragment of the investigation which is in hand, they may well regard it as slow work, offering little satisfaction. But when different children, or different groups of children within a class, are working at different parts of the same realisation, with the interest in view of piecing their small conclusions together, their sense of progressive activity is very much enhanced. Also they are learning, in another aspect, the lesson of co-operation.

On the question of interest, it is most important that problems for early heuristic work should be drawn largely from, or closely associated with, the facts and questions of everyday life; or at least that some point should always be involved of which the children can see the importance. The training of the spirit of discovery is only one element in the complex of a teacher's duties, and there is plenty of work in which interest neither can nor ought to be made too easy; but in heuristic work a child is necessarily walking in the dark to a great extent, and needs a motive for interest at

least as strong as that which inspires the adult research worker. It is largely the fear, or the experience, of reluctant and apathetic work that makes many teachers prepare easy, false 'certainties' for their pupils to discover; the remedy is not to give the glamour of a fictitious short cut to the problem, but to make the problem so unmistakably worth while that a modest and an intellectually honest approach to a solution, however incomplete, will give pleasure and satisfaction. Children have a remarkably keen sense of intellectual honesty besides their embryonic desire for intellectual adventure, and they will follow a teacher into any uncharted seas if they know that the log-book is being honestly kept and that the landfall has not been prearranged for them.

CHAPTER V

THE MOTIVE TO LEARN.

THE false opposition between the ideal and the utilitarian aspects of education is largely due to a lack of distinction between that which is useful to society at large and that which is useful to the individual, for the forwarding of his career. The connexion of the two ideas is sound in itself; the welfare of society is bound up with the progress of its component individuals; but it is important to keep distinct the two allied conceptions of socially utilitarian education, and vocational education. The latter has its important, subordinate place among the aims of our teaching, and those are right who both recognise its importance and try to keep it in its proper place; but there is another view of utility besides the vocational, and it is this that chiefly raises utility above the level of materialism; the view that regards social usefulness as something to be desired before individual success.

Even this view is pragmatical, and pragmatism, too, always needs to be carefully confined to its proper sphere of influence in education, as in thought. But we are prone, in teaching, to create an unnecessary gap between the ideal and the utilitarian by unnaturally forcing our conception of the ideal upwards, and our conception of the practical downwards; neglecting that vital region of social utility which naturally bridges the gulf.

We ought, says Locke, to 'make the child comprehend (as much as may be) the usefulness' of that which we teach him—for the sake of engaging his interest; it is a corollary of the same maxim that we ought to develop his sense of the finer utilitarianism by continually engaging his interest in the social values.

This is not to be done only, or chiefly, by teaching him how the simpler forms of those values are apparent in the outer world, though that is a second stage which should never be omitted. The first stage is to give a social utility to class work itself, within the microcosm of the school. If children do not realise the social values in class work, which they have seen, they are not likely to realise them in the affairs of the world which they have not seen. Several points of method already

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outlined have touched, incidentally, upon the region of social utility, which is, indeed, an idea to be accorded its due place and proportion in all teaching, not dwelt upon occasionally and intensively. I will try to furnish one or two additional instances.

A junior school class was planning a modelled representation of the school house and grounds. When the children had taken measurements round the building, the question arose how to find its height. From the eaves to the ground a string could be let down, by leaning out of an upper window; but how about the ridge of the roof, and the chimneys?

The opportunity was thereupon taken for a middle school class, just beginning simple trigonometry, to make it their next problem to calculate the required heights, from measurements taken in the playground with tape and quadrant; the younger class being taken out for a few minutes to witness the practical part of the operation, which was explained to them as fully as their stage of understanding would allow. The results of the calculations (one measurement having been allotted to each of several groups of children in the elder class) were duly checked by the teacher

and handed on to the junior class, who proceeded to construct their model accurately to scale according to the figures given.

Thus the elder class gained a practical experience of the usefulness of trigonometry, while the younger class learned to respect, and aspire towards the useful application of, mental processes beyond their present comprehension. One bold spirit, indeed, was anxious to begin trigonometry forthwith.

It will readily be seen that intercommunication of a similar kind between classes can be organised in the treatment of many school subjects. Graphical charts, historical or geographical, prepared by elder children, can afterwards be utilised by younger, both being told of the relation thus established between them. A chart of the Latin regular inflexions viewed as a whole, prepared by an elder class for purposes of revision and copied fair by each member of that class, was found extremely useful in teaching the class next below. Children show themselves especially keen to make such work clear and intelligible when the enlightenment of their juniors is in view; whereas they can with difficulty be persuaded to set out elementary things clearly and in orderly fashion for the sake

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of the effect of this activity upon their own minds—an effect which they are not yet psychologists enough to understand. But they will gladly do anything which they can see is a service, as every capable nurse knows; the teacher often gets the fact obscured in his mind because the methods of the classroom, more rigid than those of the nursery, do not so readily set a premium upon the principle of service. Service is, none the less, the highest utility; and it ought to be very much better represented in class method than it commonly is.

To this end there are numberless small opportunities of mutual help in work, not individually impressive but of great cumulative effect, that a teacher can seize upon and weave into his method. Setting the brighter pupil to help the more backward is a practice fairly common, but not common enough; it helps the quick-witted as well as the slow-witted child, by safeguarding him against his usual tendency to skim over the detail of his work in too facile a way. Children should not be led to think too much of going one better than their neighbours, but rather of helping anyone who has given a faulty answer to amend it. 'Can you help him?' is the useful formula in 'passing on' a question

from one child to another; and 'Does that help you?' to the child whose answer has been amended. To create an atmosphere of mutual help in class work is to establish by the most natural means the idea that right thought is a socially useful possession.

It is time to pause in this review of method, which has throughout taken for granted a readiness for knowledge and for educative activity on the child's part, and to consider the phenomenon of unwillingness in the child either to think or to act. An idea has been implicit in the foregoing chapters that we have only to make our methods sound and human, and in a measure intuitive, to evoke infallibly the co-operation of the childish will. I believe, from experience, that this is broadly true; but the fact remains that when a teacher has done and is doing his best the response from the class as a whole seldom comes fully up to his hopes; while the response from certain individuals in the class falls far below his expectations.

It seems reasonable to suppose that when a class as a whole disappoints the teacher, and no extraneous source of distraction or disturbance is

to be traced, the teacher ought to look at home for the cause; and experience indicates that he need seldom look in vain. But the unresponsiveness of individuals, so often the source of anxious heart-searchings on the part of the conscientious teacher, can sometimes be profitably regarded as a cause in itself, though also, it should be needless to say, as a cause for which further causes have to be sought.

Before we decide that individual work-shyness is the cause of individual bad work, we have first to look at home for any weakness or lack of vital appeal in our method, but, as has just been suggested, the response of the class as a whole may be provisionally regarded as a reasonable test in that respect. The trouble is, we are supposing, that one or more children are resisting the general current of advance.

The first obvious question is whether these children are not out of their depth and ought not to be in a lower class. Another question is whether they may not be incapable of adapting themselves to the school system as they find it; this has not infrequently been the case with children who have been proved in after life to possess high intelligence, but of an unusual type, and the fact must be

recognised that failure to attract these rarer types of the young and willing intelligence is a sure sign of narrow curricula and constricted method. To this extent, then, our feeling that what is good enough for the rest of the class ought to be good enough for the recalcitrant individual may need modification.

But every teacher knows that there is a type of individual resistance to the process of teaching which is not due to stupidity, or to insufficient previous training for the work in hand, or to any originality of mind that is failing to find self-expression. It is simply a definite unwillingness to make a personal effort.

The further causes of this unwillingness may be physical, mental, or moral. On the first count it is surprising how often a case of work-shyness will yield to a couple of minutes' breathing exercise in the open air, the child being sent out of the class room for this purpose. (But the success of the device is often, probably, as much psychological as physiological.) Attention to rightness of poise and posture, the detection and overcoming of unconscious habits of muscular tension, and continual watchfulness for signs of eye-strain, are also things to be borne in mind; no teacher

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can afford to neglect the rudiments of medical knowledge, and there are several excellent and simply-written books for our guidance.

Mental causes are far harder to trace without much experience, and I will only speak of the elementary factor of fatigue. It is too often forgotten that a child can be thoroughly tired out in one region of his mind, while other regions are alert and perhaps chafing at their inactivity. To take one simple instance; the co-ordination of brain and nerve through which the act of writing is achieved is very much more easily tired in some children than in others. In this case a substitution of oral for part of the written work removes the trouble. In general, local brain-fatigue should be suspected whenever a child is inconsistently work-shy—keen in some parts of a lesson, suddenly listless in others. The child himself can seldom give any idea of what is wrong upon his own initiative, though he can generally corroborate and explain to some extent as soon as the teacher's observation has begun to get on to the right track.

When a process of elimination drives us finally to identify a moral cause of work-shyness, this can nearly always be traced to a feeling of hostility

on the child's part; some personal hostility, translated by a more or less obscure process of mind into hostility to work in general. Assuming that the work is interesting in itself, and within the capacity of the child, who is not physically or mentally hindered from carrying it out, an unwillingness to work is, fundamentally, simply an unwillingness to serve; it is a lesion of the social sense. And such lesions spring from a temporary conviction on the child's part that the world is not deserving well of him. There is a twist in his consciousness founded, perhaps obscurely, upon a feeling of anger. The teacher can sometimes trace this cause to its root, and either clear it up or point out the unreasonableness of the sentiment. But the appeal to reason may fail at first, and again the root cause of the trouble may not be traceable by any but a skilled psychoanalyst. In either case, new social motives for work should be put forward, and made dominant by repeated suggestion. The teacher's last resort for self-criticism may be the reflection that in a class where the social aspect of work is effectually brought out work-shyness disappears as though by magic.

The problem of work-shyness has its ready

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solution in the creation of interest. No child can be lazy if he is interested enough; and a good deal has already been said about the manner in which true interest may take root and grow. But there is always a danger in over-insistence upon the value of interest. It is not a danger that interest may be considered too important, or that the means for its achievement may be too fully worked out; for this is impossible. The question of interest, in its own field, is paramount. But there is always the danger that the modernist in education may concentrate too exclusively upon interest, leaving out other considerations which are at least equally important. And the cult of interest itself, thus isolated, is apt to become a tenuous and an artificial thing. Real interest is not a kind of jam to accompany and disguise the powder of instruction; but artificial interest, imported merely for the sake of ease and comfort in teaching, can very easily become a superficial attraction that beguiles rather than inspires the learner upon his way, leaving the essentials of knowledge and of thought as uninspiring and as unattractive as ever.

In this connexion Mr Clutton-Brock¹ has given

¹ *The Ultimate Belief*, Constable, 1916.

a special sense to the word disinterestedness, meaning thereby, one might say, a special kind of interestedness, and that the most valuable kind: interestedness in the absolute values of truth, beauty and goodness, and in each for its own sake. Without poaching upon Mr Clutton-Brock's preserve, we may perhaps consider with profit how the disinterested view of knowledge can be fostered in practical teaching, so as to put the learner in possession of the best motive for learning. This is a fundamental consideration.

Disinterestedness is the power to abstract oneself from everything but the inner meaning of a subject—the meaning that is personal to oneself but yet beyond merely personal interest. Here the practical man has an objection to raise; is not the absolute value in a subject too remote, too little related to practical affairs, to be allowed to engross the minds of the young? The answer lies in the fact that the great advances have always been made by those who thought first and foremost of their subject for its own sake, and only second of its application. We have begun, lately, to think seriously of the relation of pure research to industry; and where would astronomy or engineering be without the labours of the great students of pure

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mathematics? It is not sound argument to say that these were born theorists—specialists, whose results others had to apply. The most and the greatest of them were practical scientists; but their greatness lay in the fact that they could pursue truth first, for its own sake, and follow up its implications later. And this is not a specialist's faculty, but a faculty that should be developed in all of us in our degree.

Let us apply this suggestion to the teaching of elementary mathematics. I have, it is true, insisted that such teaching should be full of concrete example and of connexion with other interests than the purely mathematical. But this is not to obscure mathematical truth, pursued for its own sake, but to reveal it. We present problems of life in mathematical form, instead of presenting mathematical formulæ apart from real life, in order that our pupils may learn to extract mathematical truth from everyday fact. And there must be no mistake that it is mathematical truth of which we are ultimately in search.

So it is with the truths of natural science or of history; modern method rejects ready-made generalisations, not because they are generalisations, but because they are ready-made. The pupil has

to learn to make his own generalisations; and he can only make them effectually in so far as he is being encouraged to desire the truth for its own sake, and to track it down through difficulties akin to the difficulties of real life.

As with the sense of truth, so with the sense of beauty. To avoid a discussion of æsthetic training in general, which I must deal with later, it may be well to confine ourselves to the single instance of beauty in language; this instance will serve to suggest a general conclusion. Why is it that steady training in the art of reading aloud, now, happily, not so uncommon in the practice of schools as it used to be, has so marked an effect upon the pupil's power of using language rightly? Surely because the written word depends for any but a merely diagrammatic value upon its association with all the instincts and feelings that belong ancestrally to the spoken word. The child who learns to read aloud learns also to read to himself the more intelligently, though in reading aloud he may study only to render words with right feeling and expression—to bring out what beauty there may be in the language. To dwell disinterestedly upon beauty of phrase is to gain a fuller comprehension of the intellectual significance of words than could

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be gained by intellectual means alone. This is an elementary example of the fact that the right pursuit of beauty leads to the capture of truth. It is a strictly practical fact of education, as the Greeks knew, that our sense of beauty enters into every vital process of our minds.

The moral values are more difficult ground for the teacher, in a sense, than the æsthetic. The field of beauty has been to a great extent left untilled by education; the field of virtue has been cultivated with a superficial completeness. But here again Mr Clutton-Brock's watchword is worth applying. We can teach children to seek for themselves, disinterestedly, the moral values that are inherent in their work. The question of method may be stated thus: there are two elements in the formation of a moral judgment by a school class, the element of discovery on the children's part, and the element of expression on the part of both the children and the teacher. It is clearly a mistake to oppose these two elements to one another and to say that either the teacher must impose his view, or the children must form their own. The teacher is there to teach; and the children are there to learn how to think. But the children should be led to think out the issue first, as far

as they can, and to formulate their collective opinion.

Here the teacher should not interfere by pre-judging the issue in any way; he should allow the crudest of childish judgments to come to expression. Then he should summarise that which he understands to be the judgment of the class, clearing up confusions as far as possible; and only then should he expound his own view—not without a considerable measure of detachment. The essential point is that the children's disinterested instinct for right should first be called forth, imperfect as its expression will certainly be. This imperfection is precisely its claim upon us.

CHAPTER VI

THE 'GOOD PUPIL'

If we put together the conclusions of the last chapter, a definition of childish morality, from the teacher's point of view, begins to make its appearance. The pupil is 'good' when

**Praise and
Punishment.**

he is allowing nothing to hinder his natural desire for knowledge—the word knowledge being here used in its widest and fullest sense. We have seen that many hindrances to the keen, disinterested pursuit of knowledge are outside the child's control. It may be that it is not the fascination of a disinterested quest, the only completely satisfying motive, which is presented to him; it may be that he suffers from one or other of the disabilities which, I have suggested, it is the teacher's business to track down and remove.

But there is still a very considerable region of childish behaviour in which the simple adjectives good and bad are the only ones to apply, at all

events in practice. In theory it remains more than probable that, although sympathetic understanding of a child's difficulties has been applied up to the limit of the teacher's powers or of his patience, the child is still in part the victim of misunderstood circumstance; but in class there is a strict limit to analysis and introspection. We have to get on with our work; and when, in spite of our best efforts, some childish recalcitrance blocks the way we have to overcome it as best we can

Punishment is the easy way and the stupid way—or so we are apt to feel when we make use of it, unless a gust of irritation has obscured the feeling. It is surely best to face the fact squarely that punishment is a clumsy makeshift; we can then add with the better conscience that, like other makeshifts, it is often inevitable. The argument is sometimes put forward that retribution is a rule of life, and must therefore be represented in school life. This argument perhaps contains a truth, which we will examine in a moment; but it also contains a falsity.

It is the business of civilised man to modify and regulate the retributions of real life; left to the operation of blind nature they are obviously

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capricious and unjust. Their injustice is, indeed, the spur that stimulates us to supersede them, as we gradually leave behind our barbarian nature, by increasingly rational systems of justice. School justice ought to be, as it nearly always is, a stage ahead of the justice of the world. Children are being prepared in the schools, not to accept the world's justice as they find it, but to bring a new and a more intelligent conception of justice into a world that has to be re-moulded by the activities of their generation. To this end it is important that their punishments, when these seem inevitable, should be very fully understood, discussed, and even criticised by them—after the event. The punishment, if it is justifiable, is a sword to cut some Gordian knot of recalcitrance; it is always wrong to punish a child who is prepared to be reasonable; and while the fit of recalcitrance is on, either reason is useless or punishment is unnecessary. But it is the greatest mistake to neglect the subsequent *rapprochement* and explanation.

It is a truism, indeed, that the punishment should clear the score; and there should be something automatic and impersonal about it if no poison of subsequent hostility is to be left to rankle. The

more clearly it is understood that certain forms of recalcitrance carry their inevitable consequences—that there are flames at which fingers will inevitably get burnt—the less likelihood there is that punishment will stir up more trouble than it allays. Here we seem to touch upon the element of truth in the notion of natural retribution. The punishments of nature, viewed in terms of human justice, may be capricious, but they are at least impartial; and they are less capricious in proportion as they are understood, in proportion as the culprit has known from the first what risk he runs.

A complete, an almost mechanical impartiality, then, coupled with the fullest understanding of the risks of misdemeanour, is necessary to make retributive punishment tolerable. But it is not really our business in teaching to re-enact the retributive tragedy of blind nature, though at times we may be forced by circumstances and our own ignorance to the clumsy expedient. Even in war our better sense restrains us from demanding retribution for the ultimate wrongs and horrors; we speak of reparation and guarantees. We have the same idea with regard to the childish misdemeanant; but it costs a mental effort to think out the means by which a child can 'make up,' as far

as possible, for his peccadillo, and an effort of moral sincerity to guard against a repetition by tracing dispassionately the grounds of his grievance. Moreover, it has to be a new effort in each case; there is no general formula.

Reparation is better than retribution, but at the best it can seldom be complete and satisfying; and there is another effort that can be made before the milk is spilt. We can study the art of praise, an art that we are all inclined to neglect, greatly to the detriment of our work. Discriminating praise is one of the finest educational instruments to our hand; to what extent do we learn to use its varying tones and shades? The child's right and natural desire for approbation, for the recognition that confirms his inner delight in a difficulty overcome, is all too seldom satisfied, though it can be satisfied by a couple of words from a teacher whose reticent and careful praise he has learnt to value. We all know how a child's face can light up at a word of approval casually but sincerely uttered; some of us can recall the accompanying inward glow that made the difficult path seem, for the moment, infinitely worth while. But that glow came all too seldom. Perhaps if the art of praise were fully developed, the dull science of

punishment might be banished into the limbo of unnecessary evils.

The accusation is often brought against the would-be reformer of school method that he is trying to inculcate a lax facility in place of the tonic rigours of the older system. We Character. may note that educational reform through the ages has had to meet this accusation at every step, without thereby shelving the question which we, in our present movement of reform, are again called upon to answer. Rigid formalism in teaching, granted such faith and enthusiasm as it can still occasionally command, does at least foster the stoic virtues in the young, if it produces no other effect of lasting value. And there is a school of professional opinion that asks for nothing more than this intellectual stoicism.

We are familiar with the type of university don who declares that a boy comes up from his public school knowing nothing of any value, but that he brings with him, if his training has been good, a power of harnessing his faculties to whatever work may be in hand. A similar type of employer is content with a similar product from the State school. Both alike explain that it is character,

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grit, power of application, that they value. It is too sweeping a suggestion that what they really want is docility. That is the negative and reprehensible side of an attitude that has its positive merits. The rather vague demand for 'character' means something, and it means something which modern method is often accused of failing to supply.

We have to answer the question whether we are not sacrificing character to comfort, whether we are not making things too easy. The criticism that is implied in the question ought to be far from unwelcome. Reform in method does mean that we remove from the process of teaching every unnecessary difficulty that we can trace to its source, and that we learn to limit very carefully the scope of the child's moral responsibility for failure or error. Do we, therefore, give the less training in the facing of difficulties and responsibilities? In so far as we do, we deserve to be looked upon with at least provisional suspicion by the upholders of the sterner way. We are called upon to show a record of our own in the maintenance of the stoic ideal. We have to show that in eliminating the artificial difficulties that are set in the way of learning we do not burke the real difficulties, but rather set the young mind free to face them with

understanding; and that in relieving the youthful conscience of responsibilities that are not justly its own we are only deepening the child's sense of his real responsibilities. Our quarrel with formalism is that it obscures the real issues both of intellectual truth and of moral vision; not that it demands, as it certainly does, a high standard of effort, but that the effort which it demands is so largely wasted. We have to show that we call forth a higher type of effort, and that we make better use of it.

To make our case completely good we must be able to show for every rule of thumb, mental or moral, that is displaced, an intelligent exercise of the child's own faculty for self-management. Rule of thumb has its undoubted uses as a temporary expedient in education, as in all human activities; it is a poor instrument for the training of character, but it is better than none, and those whom we accuse of putting too much faith in it have an especial right to ask what we propose to set up in its place.

It might be said that real character-training consists in the gradual substitution of intelligent, definite self-guidance for rule of thumb. But there must be no mistake about the definiteness; and

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in this respect modern method cannot be held guiltless of certain sins of omission. We must either lay down the law for children or teach them to lay down the law very explicitly for themselves. Formulation is essential to rule, whether it be self-rule or outside control; the result of abandoning formulation is characterless work and characterless behaviour. The practical moral, if we are not to lay ourselves open to the charge of an invertebrate idealism, is that we must give very much more practice than is usually given to the child's power of statement, and largely extend his opportunities of acting upon and testing his conclusions. A mere 'That's right' from the teacher is only rule of thumb at one remove from pure dictation. Children learn by degrees to lay down the law responsibly for themselves if they are always expected either to hold themselves to their word or dispassionately to admit their mistake, search out its cause, and frame a new formulation.

This is an elementary essential of character-training; and it needs to be developed, especially in the early stages, over the smallest issues even more than over the greater. It is very easy to overburden a child's sense of moral responsibility; and in matters of conduct, involving the emotional

factor, the comfortable exactitudes of rule of thumb should only slowly be displaced. But it is not very generally realised how closely the mental and the moral processes are intertwined, in the sense that practice with simple and impersonal mental processes can prepare the way for right application of independent moral processes, with their accompaniment of personal feeling. For a child to have learnt to state his intentions clearly over the smallest problems of class work, to make his plan and follow it, or, if he changes his plan, to know and say distinctly what the change is: this means that the child has mastered something of the art of self-guidance, and has gained some notion of individual purpose and procedure, which is the mechanism of character.

For the teacher's injunction, 'This is the way to do it,' there is gradually substituted, as faculty develops, 'Make up your mind first how you are going to do it.' Indeed, character is largely a matter of focused intention; and the question that we have to answer is whether we are really endeavouring to develop childish control of intention along intelligible and systematic lines.

There is more to be said about the verdict passed

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upon much of our secondary education by such people as the professor, the technological instructor, the business employer—those who receive the human product and judge of its equipment. Again and again we hear them saying that the tangible results of school instruction are in the majority of cases almost negligible, and that those who do 'know anything' generally know it all wrong. On the other hand, they pay high tribute to the character-training provided by our secondary system. There is a sense afoot that faculty and character are the substance of educational success, and that direct results of instruction are only the fleeting shadow.

This is the shape in which the doctrine of the great educational reformers has at last come to present itself to the general consciousness. It is an improvement upon the old notion by which teaching was vaguely regarded as the mere storing of a knowledge-box with facts; but it is obviously a mistake to regard character-training and instruction as opposable alternatives. They are inseparable, and each has its own substantial or insubstantial quality. The fact that our secondary instruction tends to be unreal and

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impermanant is a defect to be remedied, not to be excused on the ground that any instruction will serve as a character-gymnastic. Our armies are not trained for war by exercises that have no relation to war, and the longer training that is necessary for the arts of peace must needs be adversely affected by an initial period of the instruction which is kept from contact with reality. And we need wits as well as wills for the tasks that lie before us.

But here again a pair of fallacious alternatives present themselves. We are invited to put a certain proportion of practical training in place of a corresponding proportion of theoretical gymnastic. This has been largely done in America. The consequence is that the gain in substantial instruction is balanced—or overbalanced—by a loss in the higher regions of faculty and will, a loss of which the principal symptom is worship of material success. If we claim that we can introduce into our teaching a greater proportion of solid practical instruction, of foundation material for useful work in the world, we must show that we can do so without loss of the higher educational values, or incur the very just suspicion of educational conservatives. To cite

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again the simple instance that was mentioned in Chapter I, we waste valuable opportunities for practical training when we teach problem work in mathematics by the use of unreal and uninteresting data for problems; but we should have done worse if, obeying the cry of the more short-sighted business man, we had substituted bookkeeping for algebra, or taken Euclid from the curriculum without replacing it by a system of geometry which at any rate aims at retaining hard logic while giving some slight introduction to the mathematics of the engineer and the surveyor.

We have a structure of secondary education based on a fine tradition and producing human material of a definite mental and moral stamina; we expect this system to extend its scope widely in the near future; we have to see not only that the structure is not weakened in the process of extension, but that it is definitely strengthened by our way of meeting practical needs. No doubt there will be another cry from the uninformed for the wrong kind of 'useful' training; we must be prepared to give them bread in place of a stone.

In accordance with our former rough description of knowledge as the result of training in language, history, and science we can trace the application

of method to the development on the one hand of generalised faculty, will, and character, and on the other hand of practical, 'useful' knowledge, in connexion with each of these three elements. It should, perhaps, be repeated that we are teaching all three, though in varying proportions, in almost every school subject; it is most important, for instance, not to neglect the element of science in the teaching of languages, the element of language in teaching scientific statement, or the element of historical time-structure in teaching anything. The use of abstracting the three elements from one another for separate consideration is not that they furnish a classification of subjects, but that they represent the three dimensions, as it were, of knowledge as a whole. And in each dimension there are these two factors to be considered: the factor of a general power over knowledge, which is bound up with the problems of will and character, and the factor of the particular, detailed knowledge developed, which is bound up with the question of laying foundations for future work in the world.

It may be justly urged, and promptly granted, that the claims of generalised faculty, reaching up into the region of character and of national type, should be given the prior consideration. But what

we have to urge as well is not only that the imparting of definite and lasting vocational knowledge is possible at the same time, and desirable in itself, but, further, that without such knowledge, closely knit with powers of the more general kind, generalised faculty itself becomes in a measure shadowy and insubstantial. Perhaps the English people muddles through because it has clung to generalised faculty, and muddles because it has so largely lacked the correlative of specialised attainment. Our best hope is that we may still win our way through our difficulties, but with a decreasing proportion of muddle.

The educational remedy, surely, is to bring more reality into the subject matter of secondary teaching. Our method must not sink into materialism and lose itself in so-called 'practical' detail, divorced from the essentials of thought and of idealism; but neither must it result in the kind of training that postpones until the end of adolescence any real hold upon the facts and the duties of life. One of the main duties of life for the coming generation will be material production—the making up of the enormous wastage of the war. That duty will be forced upon us by necessity. The question is not whether it will be faced, but whether

it will be faced with understanding; and for the answer to that question the teachers of the present time will be largely responsible. Divorce between the practical and the ideal aspects of education will be waste of the responsibilities and opportunities of the times, whichever aspect is allowed to remain in the foreground.

At the same time our method must grow organically, proceeding from where it is, and not attempting to jump blindly to where we should like it to be. The question for the teacher is how to make character and general ability more full of detailed and definite content, how to seize existing chances for the addition of practicality to character. In the further discussion of this question our threefold division of knowledge may prove useful.

PART II: THE CONTENT OF EDUCATION

CHAPTER VII

LANGUAGE, HISTORY AND SCIENCE

I HAVE already suggested¹ that a general grasp of language as a science and as an art should be the recognised central objective of the teaching of languages, including the mother tongue; and that the teaching of language should not be confined to the school periods allotted to languages, but should be interwoven with the teaching of all subjects, at any rate to the extent of brief comment and allusion, whenever the class has to deal with a question of verbal expression.

To do this is not to weaken but to reinforce concentration of attention upon other subjects. A high standard of rightness and accuracy in statement furnishes both an aid and a working test to

¹ The suggestion is not only my own ; cf. the report of the Joint Committee on Grammatical Terminology (Murray, 6d net.), and Professor Sonnenschein's *Parallel Grammar Series* and *New Grammar Series*, for method in the teaching of language as a unity.

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the children's developing powers of comprehension. The language-faculty has no isolated province of its own; it is an essential element in every complex of faculties by which this or that department of knowledge is mastered. I have now to particularise a little more clearly as to the development of the language-faculty in class work. The familiar Nemesis of particularisation will beset me; as these notes become more definite they will necessarily become more Utopian; but I hope to trace one or two lines of method that can be adapted by the teacher within the bounds of the system to which he is committed.

The science of language needs to become progressively systematised in the mind of the learner; and it is not commonly realised how unnecessary is most of the muddle that exists in a child's mind over the handling of words. So simple a matter as the classification of words into nouns (substantive and adjective), verbs, and particles is often muddled by children who are already 'doing Latin.' This is part of the general tendency to make silly mistakes that appears with all subjects; we are prone to make light of this tendency, and to say that children grow out of it. So they do; but they only grow out of one phase of unnecessarily imperfect

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comprehension into another. This is simply education in the policy of muddling through. The silly mistake, after a reasonable margin has been allowed for natural slips and lapses of the as yet unpractised memory, is a sure sign of the muddled mind. To pursue our very elementary instance, a child who has not a real and a clear grasp of the distinction between a noun, a verb and a particle, when he first learns that language is a science, will carry a spirit of haziness through with him from form to form till we find him making false concords in Latin prose and 'howlers' in translating Aeschylus.

There seems to be only one remedy: to teach children the nature and properties of words—grammar in the abstract—as a central study, round which their study of languages can be arranged and co-ordinated as they go on; and to apply their gradual formulations in the science of language to the actual use that they make of words in every school subject—grammar in the concrete. This is Utopian, because it involves a demand that every teacher should be a grammarian, and that the teachers in a school should all be united in one grammatical plan of campaign. But every teacher ought to be a grammarian; and co-operation

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between teachers for the co-ordination of aims and methods ought no more to be neglected than co-operation between the members of a military staff. In order to keep children clear of the spirit of haziness we have to make them conscious of the reality of the rules of language; and this can only be done effectually by letting them see those rules consciously applied all round. Otherwise grammar becomes a Sunday religion applicable only to the class in which it is taught.

This is not the place to outline a text-book for teaching the structure of language, but it may well be asked what precisely we mean by a study of generalised grammar. My suggestion is—and it is a suggestion that has been tested in practice—that language should be taught as a subject, and that languages should be taught, in close correlation with one another, as special cases of that subject. The broad elements of language-structure can be taught from English and, a little later, from English and French together; then the more detailed structure of Latin can be brought in. Different languages must, of course, be studied separately to a large extent, and with an increasing degree of intensive culture as knowledge and faculty

develop; but the important point is that in the learner's mind they should be consciously referred to a common centre, a common controlling system of language-principles, and that from this centre his language-morality, so to say, should reach out and influence his every effort of verbal expression.

Education has to develop two powers and to make them efficient; the first we may call the intellectual conscience, the second the power of moral practicality. Both are dependent for their expression upon the right use of language. The intellectual conscience is unsatisfied if the instrument of language is not thoroughly understood; no workman can satisfy his own sense of workmanship unless he knows his tools. The moral sense is equally unsatisfied if verbal expression fails of practical utility; the instrument of language must continually show its usefulness in order to justify itself to the mind of the learner. We have to combine the teaching that makes a child understand the inner structure of language with the teaching that makes him relate that structure at every turn to his needs of expression. It would be foolish to call either aim ideal, and the other practical. Both are practical and ideal at once. The thing that matters is to

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teach the science and the art of language in such a way that, to the mind of the learner, intellectual conscience and moral practicality make the same demand, and language becomes the willing servant both of head and of heart.

A similar principle applies to historical teaching. It is not enough that children should learn to 'know history'; they have to develop the power of historical vision, the sense of time-perspective.

World History. Leaving aside for a moment the application of the historical sense to other subjects than that technically described as history, we may note the change that is gradually taking place in our view of history as a formal school subject. Most of us can remember a time when a memorised list of the kings and queens of England, with their dates, was a negotiable asset that could readily be turned into marks. Then came the delightful declaration of some more modern history teacher that dates, comparatively speaking, didn't matter. By degrees the idea penetrated our consciousness that merit was to be acquired not merely by knowing what things happened, and for how long, and in what order, but through realising how and why they happened. Then,

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perhaps, we had the unusual good fortune to be drafted into the class of a teacher who made some attempt to deal with world history, or at any rate to present historical detail as part of an infinite series, and as related to an endless network of other contemporary detail. Our historical horizon broadened; history became, for the first time, a thing of infinite interest.

Even then interest, though infinite in potential range, was of the academic kind. Biographical detail would waken, now and then, a gleam of personal enthusiasm, but our sense of historical perspective was largely diagrammatic. Dynasties, wars and acquisitions of territory, developing systems of law and government, became interesting because they were more than isolated parcels of event, and were linked up as parts of a general scheme of fact and causation; but there was a certain bloodlessness about the total impression (except in the case of the wars). Even if we were learning, in a sense, to see every event as a part of the history of all humanity, that history itself seemed unaccountably to let the major interests of humanity slip through its meshes.

The reason for this may perhaps be most simply stated by saying that the past, viewed simply as

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the past, is dead; it lives only in its union with the present and, through the present, with the future. Our studies in history never led up to the present; they 'petered out,' rather inconclusively, with the accession of Queen Victoria, leaving by far the greater mass of the causative factors of present-day life untouched. This, even, presupposed that we had been lucky in a system resembling the children's race-game, by whose rules the player when he has thrown a certain number is obliged to go back so many stages, as the promoted history pupil goes back and begins the Tudor period once again. Needless to say, the thorough study of any period has its educational value; but this is not in itself the true historical value.

All history teaching is unreal in the degree to which it fails to co-ordinate the past with the present, and our method has to aim at effecting that co-ordination in increasing measure. Two attitudes of mind conduce to this aim: the attitude—not strictly a historical attitude at all—by which events are regarded as essentially timeless, and the attitude by which they are seen along a vista stretching from Now to Then. And the two attitudes of mind have to be developed in that

order. The historical stories—which are not strictly historical—told or read to young children are timeless stories at first; their connexion with the present is the connexion of analogy. The story of the Black Prince is timeless, and it is the story of many a present-day school-child's father or elder brother; later it becomes historical as well, as a shining instance in the history of the tradition called chivalry. In the same way Greek and Roman history are timeless as they are first taught; gradually they are (or should be) so taught as to show how Mediterranean civilisation arose, and flourished, and became European civilisation. Directly we speak of European civilisation the mind turns to the present throes of Europe, and we wonder what difference it might not have made if European history had been taught, in the schools of all the nations, even for the last fifty years. Here we come to the relations between one line of historical causation and another; and here it is that science (in the wide sense of the term) helps history. It is the business of science to say in what relations things stand to one another; it is the business of history to show how those relations came about.

The most obvious instance of our meaning is

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the correlation of history with geography, and of both with a relevant proportion of geology, palæontology, biology—and a few other -ologies whose formidable names ought not to scare us away from the duty of understanding and teaching their simpler lessons as to the nature of our world. Co-ordination in the teaching of history, geography, and 'natural science' gives surprising results in interest and in effective grasp of knowledge. To choose a single value from a multitude, it is a great help to a child's fundamental understanding of the ways of man, and consequently to his patience with history (for all children expect the world to be more perceptibly rational than it really is), if he is conscious that the ape and tiger—to say nothing of the donkey—die hard in man. And there is also the moral value of the analogy that they die equally hard within the microcosm of his own self. The Black Prince is among other things a shining example of evolutionary triumph. And to make our conception of history travel thus beyond and outside the purview of the history text-book is precisely the way to bring history into relation with the present.

Taken as an isolated subject, history suffers perpetual incursions of unexplained event; to

cite the largest example, the industrial revolution cannot be explained without calling in the aid of geography and physical science; and in point of actual fact formal history teaching throws up the sponge (and reverts with a contented sigh to the Tudor period) when it comes to the industrial revolution and to its main task in the linking of the present with the past.

Perhaps the best general recommendation is that we should be more ready to teach history backwards: to take present facts and events and ask from what causes they arose, what further causes lay behind these, and so on. The method may sound revolutionary to those who have not tried it, and it certainly is revolutionary in its consequences, if to bring history into relation with every sort and kind of knowledge is revolution. It opens our eyes to the fact that very little can be explained, unless misleadingly, in terms of history-book material alone. But it also leads us to enrich and revivify that material surprisingly. It would, of course, be absurd to make the tracing back of causes displace the ordinary methods entirely; its value is that it infuses life into the ordinary methods by inducing recognition of the fact that everything is history.

In one sense—a sense upon which the scientist must never presume—science is the *ultima ratio* of knowledge. Language is the expression of truth; history explains the genesis of our given facts; science, in its widest aspect, is the existing complex of known relations in which facts stand to one another. The modern humanist is prone to say, in effect, ‘Take care of truth in expression and the facts will take care of themselves.’ The modern historian has the grace to be conscious of present shortcomings, if we judge by his reluctance to put forward any philosophy of knowledge whatever. The modern scientist—or realist, to revert to the old educational term—rebels against the dictum of the humanist, claiming that the facts are essentially more important than anything that we may happen to say about them.

This controversy between humanism and realism rests upon a false antinomy. It is as though blue and yellow should contend for the credit of producing the colour green. It is even more foolish, for blue and yellow can at least exist independently of one another, whereas there can be no language without the (potential) science of language and no science without the language of

science. Neither can dominate education to any degree without sterilising it to precisely the same degree. Our task is to bring the two into effective partnership, in preparation for the time when historical method will awake from its present involution and come in to complete the trinity.

The position of science in educational method, like that of language and of history, needs to be at once nucleated and pervasive. Let us speak first of the nucleus. Even as we still teach not language but languages, so we still teach not science but sciences. And we need to recognise that the teaching of sciences is definitely antagonistic to the teaching of science, precisely in so far as 'the sciences' are taught without rational co-ordination with one another, just as lack of co-ordination between Government Departments is fatal to the science of government. We have made a beginning, in the 'nature study' of the elementary and of the more progressive preparatory schools; this, when it is not a mere game of chance played with seedlings and tadpoles, can be a very sound and sensible introduction to generalised science. But it is very difficult for the middle and upper school teacher to build upon this foundation, even when the foundation has been truly laid. His building

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materials are *dissecta membra scientiæ*: physics, chemistry, electricity; heat, light, sound; geology, botany, zoology—the list is endless. And if he touches one of these ‘subjects’ he is usually expected to give a term’s course upon it, and then to turn to another ‘subject.’

I suggest that the teacher, to whatever extent the matter lies within his control, should decline to do anything of the sort. Any intelligent teacher who is interested in science as a whole can learn to teach science as a whole. A broad scheme of synthetic science teaching was published in *The Times Educational Supplement* for December, 1912; and this was the result of practical experiment by one teacher (a headmaster, it should be confessed) in the presentation of ‘the sciences’ as a union in diversity. Any science teacher who cares to try can produce a similar or a better scheme, and apply it to class work to the extent of the facilities at his command. There is no question that the effort is worth while. Merely on the low ground of immediate ‘results,’ scientific facts, synthetised and co-ordinated by means of their various cross-relations, are permanently remembered; taught separately, each group *in vacuo*, we all know how rapidly and cheerfully they are forgotten.

Ultimately, nothing can be taught so that it will stick in the mind, still less so that it will blossom and fructify, unless it is taught, consciously or unconsciously, as part of a philosophy. Such co-ordination as we have in school method is largely unconscious, because we are apt to regard the philosophy of method, like philosophy in general, as the province of a non-human class of people who can be labelled as specialists, and disregarded as such.

But we are beginning to realise that all specialism is bad that is not combined with a corresponding 'generalism.' This is true of philosophy and of education; and it is most obviously true of science itself. Solely on the ground that we want to produce good scientific specialists and not bad ones, we can see that a sound general education in science is advisable. And there is the other side of the picture, that we want to train up people who can understand what their specialists tell them. For both needs the co-ordination of science, of scientific thought and method, with every school subject is imperative. We must not only have our nucleus at which the elements of 'the sciences' are brought into related union with one another, but from that

nucleus there must also radiate, into every region of school work, the influence of the scientific consciousness and the scientific conscience. This means that every teacher ought to be in some degree a scientist—not an expert, but not a smatterer. And I would urge as much the most practical step that can be taken towards reform in scientific education that every teacher should make some study of science, so as to be able to participate in and to foster the scientific spirit that should pervade the whole of school work. Only thus can we reincarnate the old humanism within which realism was comprehended.

One or two cases drawn from experience may serve as instances of the use, not as proofs of the usefulness, of the synthetic method. Proof, in such a matter as this, must be cumulative, and, therefore, voluminous; and at the best, any number of instances adduced in cold print have not the force of even a few preliminary results gained by personal experiment. One of the chief aims of this book is to suggest, as has been suggested by all the history of past educational reform, that it is necessary and right to try to present knowledge

A few
Examples.

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as a unified whole. The conclusion that it also pays, in the immediate practice of teaching, is the conclusion of those who have made the trial upon any coherent and rational system; but no such system can be set out in its completeness, cut and dried, either by the theorist or by the practitioner in education. Any system, in any school, has to grow organically out of the methods existing in that school, and the best system is fashioned by the enthusiasm of those who use it. I wish, then, in dealing with the synthesis of subjects, to put forward an idea rather than a formula, and, in illustrating the application of the idea, to show that it can be, and has been, made real in practice in one way without suggesting that it can be made real in that way alone. It is open, for instance, to the reader to improve upon my rough division of school knowledge into the three interpenetrating elements of language, history and science; the classification is offered only as a bit of mind-machinery which I have myself found useful in the attempt to frame a synthetic curriculum for actual use.

In this curriculum Latin was begun at the age of twelve, after three or four years' careful working out of the elementary principles of language as deduced from English and French. Greek was not

begun before sixteen, unless a boy had to pass on at fourteen and a half to the classical side of a public school. In such cases an extra two hours (four half hours) a week were devoted to Greek coaching, the study of Greek being based upon the general principles of language-structure already worked out through the correlation of English, French, and Latin. In this way the whole of Greek regular accidence could be mastered in a few weeks, and a grounding could be established in a term that enabled any boy who had been through the previous language course to take a place in public school Greek equivalent to his standing in other subjects.

In one case a boy of good general ability, but not especially proficient in language—he was better both as a historian and as a scientist—was obliged, owing to a sudden change of plans, to face examination in Greek at six weeks' notice, and passed without difficulty after doing half an hour's work a day for that period. These are 'results' of a somewhat mechanical type, though they have evidential value for that very reason; it is a question which reformed method must always be ready to meet, whether it qualifies or disqualifies children for work on other lines.

And, further, subsequent progress made it clear that real grounding, not hasty and superficially successful cramming, had been achieved. The remarkable thing from a teacher's point of view was the ease with which elementary Greek could be comprehended by pupils who regarded it simply as language made conveniently precise by its large supply of significant inflections. The common process of memorising, forgetting, re-memorising, and forgetting again, so wearisomely familiar to the teacher of isolated languages, proves quite unnecessary when memory is supported by sense of language-structure.

The case of a single individual may illustrate the advantages of generalised history teaching—the case of a boy who came into contact with this type of teaching at the age of 15, bringing with him the reputation of a painstaking dunce who could never do anything right. His conception of the historical periods that he had 'been through' was certainly chaotic. But he had a hobby—the collection of prehistoric relics; this had been treated as an amiable weakness, a trifle reprehensible in one who showed so little concentration in his book-work. A keen teacher of natural science and geography promptly seized upon this gleam of

interest, and talked to the boy about his hobby in connexion with geology and historical geography; this proved to be the awakening of an interest in history—in world history; the more ancient, at first, the better for this pupil's taste. But it was not long before his appetite for all history became voracious, and within a couple of years the dunce had become the shining light of the school as a historian, and quite a capable scientist; while it became obvious to him that language was at least important for the writing of essays on history, and foreign languages for their association with the peoples of history.

It would be easy to multiply instances of this kind, in which the development of a special and an apparently isolated faculty leads to the opening up for the learner of an entire region of thought, while this in its turn induces the realisation of other, interpenetrating regions; a more general illustration of synthetic method may be taken to show the reference of knowledge to the scientific 'nucleus.'

A middle school class was carrying on certain refinements upon earlier and more juvenile experiments in seedling-culture, and during the same

course learning to analyse soils into their simpler constituents (samples having been sent for from different typical regions in England—chalk, sand, clay, peat, and so forth), and also to make tests for the principal food-compounds of vegetable origin. In geography, the regional distribution of vegetable foodstuffs was being considered, with their means of distribution and the commodities for which they were exchanged, while attention was also being paid to the origin of the soils involved. In history, the first effects of the industrial revolution were being studied, particularly (with regard to our present connexion) the displacement of agricultural values. Relevant material from each of these studies was being brought into the mathematical room for problem work, proportionate tabulation or graphical representation; while essays were set in the composition hour, in which broad treatment was encouraged of the complex of relations and realisations implied in this particular phase of work.

This is not an example of especially closely-knit correlation, having been chosen rather as typical of that which can be managed with ease by a staff who work together upon a reasonably coherent system. The co-ordination of this phase of work

with others, prior and subsequent, may be left to the consideration of the reader; and it is perhaps unnecessary to dwell upon the gains in interest and understanding that accrue when such a group of mind-processes is made as far as possible into a unity, not cleft into a number of isolated 'subjects,' each sterile by reason of its isolation.

CHAPTER VIII

ARTISTIC TRAINING

IF we enable a child to view knowledge as a unity, we open up for him a practically endless series of vistas. It is the aim of the synthetic method that the realisation of any new fact may be a relevant addition to the context of knowledge as a whole; more, that every new realisation may do something to throw light upon the nature of reality. We can all remember from our own school days occasional moments when a realisation would come home to us with peculiar vividness and force; a telling instance of some general truth or principle, presented in class with perhaps an unwonted touch of insight and enthusiasm on the part of a master, would appear to us to 'make sense' in a quite unusual degree—to put us momentarily in command over a whole region of ideas. It is possible to make this experience, for those whom we teach, not

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tion.

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occasional, vague, and momentary, but continuous and progressively satisfying. Presentation is not all, as we have seen when discussing the question of the spontaneous activities of a class, but it may be repeated that presentation has a unique and an irreplaceable function to fulfil. The teacher who would awaken that inspiring sense of command must himself possess constructive imagination.

One of our first duties in learning to teach (and we are, or should be, always learning) is to educate our own imaginations. Only thus can we learn to educate rightly that much-talked-of faculty, the imagination of childhood. The word is used in so many senses as to have become a little indefinite; let us make the postulate, for the purposes of this brief discussion, that imagination is the power of building concepts together so that they will make sense among themselves and bear a general interpretation, whether in terms of thought or of feeling. It is true that a child's early imaginings often make nonsense, and that the interpretations that he puts upon facts are more of the nature of myth-making than of science; fairy stories, nursery jingles, and the myths of Mother Goose and Father Christmas

are part of a sound nursery tradition, partly of nonsense-making, partly of the making of a merely symbolic kind of sense. But the nonsense is there to be laughed at because it is nonsense; it is, as it were, an inverted sense, and it prepares the way for sense; while the myths represent a consciousness of wonder which ought not to be dulled, but rather accentuated, when the time comes to replace them by knowledge of that which they symbolise. It is part of our business in teaching to realise and encourage the different natural phases of transition between the imagining which is pure fancy and the imagining which is a laying hold upon reality.

Historical imagination, to recur to a former instance, first develops in children, as in primitive peoples, through myth and legend; gradually the stories of the past that are told to them can be given more definite content and sequence until they become effective landmarks in time. Then, as the vista of world history is opened up, each landmark begins to be realised in its own place and perspective. It is of little use to jump straight from legends and stories to the formal study of a historical 'period'; the childish imagination cannot take the leap; and is thenceforward left behind, to the great

detriment of the historical sense. A useful, though still insufficient, store is being gathered of published historical stories for young children, but there is little or no provision for a succeeding phase; the teacher has to draw upon his own powers of picturesque narration in order to carry the children's interest across the gap. Here co-operation between class and teacher in building up an imaginative concept of events is of the greatest value, and that teacher is fortunate who has practised the art of managing class discussion to good purpose.

History furnishes a good instance of the transition stage, in present practice a distinctly difficult stage, between the childish and the more mature phases of imaginative understanding; but in all subjects there is the danger that the gradually developing faculty of rational imagination may be too rapidly loaded with a burden of increased weight and complexity, while at the same time it is being starved of its two principal foods—picturesque interest, and the sense of vista and of intellectual adventure. A fairly definite moment occurs in the lives of most children when it is decided that they must begin to do 'solid work.' Our suggestion is not that the transition implied should be forgone or put off, but that it should be effected with some

regard to the fact that few even among mature minds can stand a sudden and complete change in outlook and in method of thought. The faculty of imaginative apprehension spreads its feelers only by degrees, and it is little short of a tragedy if those delicately branching feelers are abruptly broken off.

I have suggested already a few of the methods by which interest can be kept sufficiently vivid and sufficiently wide in scope to prevent 'solid work' from becoming flat, constrained, and meaningless; but we cannot touch upon the subject of imagination and treat only of imaginative perception and understanding. Imagination is of its nature creative; and here we come in contact with artistic faculty as the friend and partner of intellection. Artistic inventiveness, uneducated and uncontrolled, is a nuisance to clear thought (just as it is a hindrance to childish truth-telling), and we are very prone unconsciously to compel children to inhibit it as completely as possible. This is less trouble than studying the undoubtedly difficult process of its right development; but economy of the necessary thought is a false economy.

Few regions of educational thought and practice

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need more careful exploration than that in which we are threatened with an incursion of art into the curriculum. The question is whether we cannot turn the threat into a promise. Experience goes to prove that good artistic training of a simple kind, even when reluctantly compressed into odd corners of the time-table, does in some curious way affect children's whole mentality for the better. When such work is given conscious and careful connexion with the intellectual subject-matter the good effect is both more evident and more immediately intelligible.

There is a need, then, to develop the artistic faculties not merely for their own sake and with a view to possibilities of individual specialisation in one or other of the arts later on

The Artistic Faculties. —that is only a secondary advantage of artistic training—but for their value as furthering that intimate grasp of reality which is the general objective of education. Deprived of artistic development, the learner lacks two of the essential means of approach to wisdom: he lacks a certain kind and quality of insight which I have placed under the heading of Imagination, and he lacks an indispensable

element in the faculty of expression—the element that makes the difference between live and dead statement.

The sceptical query must be met, whether as a fact the child who learns brushwork and classical dancing becomes in some mysterious way a better hand at expressing himself and, generally, more of a young philosopher than the child whose education is kept strictly to business in the scholastic sense. The answer of present, somewhat tentative, experience is that this does seem to be the case. We may not agree with, for instance, M. Dalcroze, that the sense of rhythm and harmony developed by a neo-Hellenic co-ordination of movement and music is of itself an education. It is, perhaps, more in the nature of a picturesque remedy for a prevailing defect in education. And generally it may be said that all artistic study which is imported into, and unrelated with, the main scholastic tradition can only have an esoteric and a somewhat dubious value.

The question is how to combine artistic with scholastic work in any kind of effective unity. It must be said at once that method to this end is in its infancy, and I shall be fortunate if I can elicit a few hints that show any distinct convergence

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of aim. The most obvious instance in the general practice of modern teaching is the connexion of brush-drawing with nature study. The philosophical point of the connexion is that a care for knowledge and a care for beauty ought to go hand in hand; the practical point is that artistic observation, justly trained, is a peculiarly acute and sensitive kind of observation. A child learns something about a flower even by his first clumsy attempts to paint it which he does not learn by dissecting and talking about it, though it is difficult to understand fully what this something is. It would savour of Oriental vagueness to fall back upon the notion of an abstract value in the act of contemplation, but the explanation seems to lie along some such line, though it needs to be more clearly defined.

We might lay down as a provisional and a partial definition that artistic education is the education of the unconscious mind,¹ and go on to say that the right union between artistic and intellectual education means the opening up of communications between what is implicit and what is explicit in our natures—the progressive realisation and control by the reasoning consciousness of the more dimly

¹ This notion is carried further in Part III.

lit regions of thought, together with a reader incursion of vital impulse from those regions into the focus of intellection. It is a fact that childish map-modelling gives rise to a better imaginative grasp of geography than can be attained through verbal instruction and discussion alone. Can it be that the child, absorbed in the act of making, is unconsciously extending the fibrils of imagination into the region of geographical knowledge? Such an idea is more than idly speculative if by its agency we can arrive at a doctrine; and the doctrine which would follow is that artistic activity should be encouraged and carried on in as close relation as possible with the intellectual concepts that are at the same time being developed. It certainly is not easy to see at once whither such a doctrine, fully applied, would lead us in practice; for application we can only trace the methods that have hitherto been tried with some show of success.

Such a method is the application of dramatic art to the realisation of history. When first the dramatisation of historical events was introduced into the practice of a certain school it was found that the scenes were performed with more gusto and effect when proposed for entertainment during a

wet half-holiday than when brought into the official history period of the time-table. Perhaps, in the latter case, childish conservatism felt some sense of unsuitability, a certain discomfort about playing in the time allotted to work. The children had not been brought up in the play methods of Mr Caldwell Cook. Eventually small plays, not only historical, but always having some bearing upon school work, were evolved and performed at a time specially scheduled for the purpose. Generally, there can be little doubt that it is best to give to each form of artistic work a period of its own, establishing correlation between these periods and those allotted to intellectual study; enough cannot be done by the individual subject teacher to introduce the element of art into his own work. Childish conservatism is so far right; and it is always our business to co-ordinate activities, not to mix and confuse them. In the instance of historical dramatisation, perhaps the most that should be done within the history class—if there is no class for embryo drama outside it—is to encourage, now and then, a little improvised dialogue in character. This, if the teacher is sufficiently at ease with the class to get it carried out *con amore*, is a distinctly useful aid to imagination.

Closely allied with education in art is education in manual craftsmanship, and here the difficult psychology of the whole subject has the backing of other considerations. The value of co-ordinating muscular with mental processes is sufficiently established, as is the gain in nervous equipoise, the physical basis of character, that comes of a many-sided training in muscular control. Indeed, it is only inertia of mind, or an honest inability to see how time can be afforded, that hinders the more general introduction of a variety of handicrafts into schools. The choice of activities that help and illustrate the intellectual work of classes is the remedy for the 'scrappiness' that is so often feared when new interests are in question; and as for the overcrowding of the curriculum, a surprising amount of elbow-room appears in the time-table, as soon as school subjects are co-ordinated instead of being pigeon-holed. The real entrance of art and craftsmanship into education, and the full realisation of their value, await that new curriculum, at once simplified and concentrated, which can only be based upon well-devised correlation.

The idea of educating the imagination and the

artistic faculties naturally carries with it a fear of encouraging the artistic temperament. We do not want to train up boys and girls to be 'temperamental,' in the American sense; and for that reason, perhaps, we tend to keep such slight artistic training as we give upon somewhat flat and uninspiring lines. This is the result of a confusion of ideas. No one really thinks, except a few extreme Philistines, that art and hysteria necessarily go together. But we are all prone to admit into our minds, without due examination, the Philistine notion that 'too much art' is unbalancing; though at the same time we know very well that those cases of artistic temperament which do the most violence to our sense of manners or of morals are due, not to the development of artistic faculty, but to the crude pressure of undeveloped, and therefore misconceived and uncontrolled, artistic impulse. The people whose temperament is the greatest nuisance to themselves and to their neighbours are people who either have the desire for creative expression without the technique or, possessing the technique, yet lack the discipline and the philosophy to interpret the desire rightly. It is that discipline and that philosophy, no less

than the delights of easy self-expression, which it is the business of artistic education to give.

I can make my meaning clearest by dwelling upon verbal expression and the artistic use of language, rather than upon music or the visual arts, since there is in the region of words a connexion that can be analysed between the implicit and the explicit thought. The apocryphal mathematician who sent back a borrowed copy of *Paradise Lost*, saying he failed to see that it proved anything, strikes us as funny (*si non e vero*) because we are aware that Milton 'proves' an endless number of vital propositions. If our mathematician had advanced the same criticism of Bach we should put him down as deficient in musical understanding, since Bach almost invariably talks logical sense; but we should not regard his attitude as ridiculous, only as unmusical. While dwelling, however, for the moment upon the art of language, we are only taking the easiest instance, and an instance that applies to any of the arts with which education ought to be concerned.

We have lately had examples of the results of training in the writing of poetry from two of those modernised grammar schools which are giving so excellent a lead to secondary education by

revaluing the old grammar school tradition (a fine thing at its best) in terms of modern method. It is interesting to note that in one case the teacher of verse composition is an advocate of 'play-work,' while in the other case the teacher prefaces the published collection of his pupils' poems with a distinct and a slightly ironical disclaimer of any desire to turn work into play. Between the results there is little to choose, discounting the work of one pupil whose aptitude is of an unusual order. In both cases there is evidence of artistic discipline, and also of the natural consequence of such discipline—a certain incipient command and control over poetic expression; and the work conveys a sense of pleasurable effort. It may be profitable to consider what is the origin of this combined sense of discipline and of pleasure in execution.

Artistic discipline is self-discipline; it is a form of self-control, and its exercise gives the sense of freedom that comes of effectual self-control. We have discussed the importance of extending the definite teaching of art in its simpler forms, and of linking up this teaching with the scholastic subjects. But it must not be inferred that the work which I classified for convenience as 'scholastic' is of its nature non-artistic. The instance just given of

the modern teaching of verse composition may serve as a bridge between the notion of art as the affair of the art schools—'South Kensington's pretty facility, or the terrible strength of the Slade'—and the conception of art and the imaginative function as an integral element in all teaching. It is obvious that in learning to write simple verse well a pupil is gaining something more than the power of turning out little poems and the opportunity to develop a real poetic talent if he happens to possess it. He is learning the art of disciplined self-expression in words: learning, that is, to make his sense of words and his use of language more alive. He is learning to bring the artistic conscience to the support of the intellectual conscience.

Until the right union of art and intellect is effected in education and made real in the curriculum, every teacher can at least do something to bring into class work that glow of the understanding which is in its essence artistic. There is no 'subject' that cannot come under its influence. But it must be recognised that we are at present labouring under a difficulty. The incalculable value of imaginative understanding is hard of achievement while definite artistic discipline is lacking. Untrained, the imaginative impulses of

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a child tend to confuse rather than to illuminate truth, unless the teacher's guidance is of the most careful; hence the very common tendency to discourage imaginative impulse altogether. And, most important of all, we lack the essential aid to character that is furnished by artistic discipline. The imaginative faculties cannot be disciplined from without, but only from within; their right training is education in self-discipline, which is freedom. We desiderate the liberty in self-control that cannot come of outward rule alone, and can only be perfected through obedience to an inner law, realised and confirmed step by step in the concrete experience of sound artistic training.

CHAPTER IX

SOCIAL PHILOSOPHY

THE word philosophy has often appeared in connexion with the co-ordination of educational activities that has been advocated in these chapters;

it may be well to define more clearly the meaning that we attach to the word in the educational sense, and to speak of the methods in the practice of teaching through which that meaning may be realised. I will speak first of the application to school work in general of one typical point in elementary philosophical method: a point that needs to be realised, in the interests of that clarity and sureness of mental grasp which we all desire in the handling of every school subject.

It is not only children in their school work who have but the haziest notion of the distinction between an absolute and a relative truth; yet this is a fundamental distinction which affects all thought and judgment, down to the most rigidly

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practical affairs of daily life. It is fundamentally important to all of us to know, and to know consciously, when we are in search of the absolute truth of any given matter, great or small, and when we are balancing relative truths in order to arrive at a working hypothesis, as sound as the material will allow, upon which to think, speak, or act. A great deal of angry and useless perturbation would disappear from human life if we were all educated not to demand an absolute when an absolute is not to be had. Now, it is a fact of my own observation, from school experience, that children no older than twelve or thirteen can begin to use the words absolute and relative intelligently, in simple instances, and that they enjoy tracing the distinction between the one class of judgment and the other. Children enjoy classifying ideas, if the means of classification are presented to them without undue complexity, quite as much as they enjoy classifying postage stamps and birds' eggs. If the teacher objects to the sound of 'absolute,' 'relative,' 'judgment,' and so forth, in the mouths of children, as being too pedantic, he can teach them to distinguish between a thing that is true in itself and a thing that is true so

far as we can make out or guess. The important thing is the distinction, not the terms. A well-educated child ought to understand quite clearly President Wilson's statement that the laws of humanity on the high seas are absolute, not relative.

I have connected philosophy with that type of self-discipline which comes from right training of the artistic and imaginative faculties. It is by an artistic or intuitive reaching-out of the mind that we frame fruitful conjectures or hypotheses—the 'inspired guesswork' of the gifted politician or man of business—and the power of guessing right, of 'knowing by instinct,' is of high value in every field of activity. But, conversely (*corruptio optimi pessima*), a tendency to guess wildly and wrongly, to guess so as to save the trouble of thinking, is highly dangerous.

It is here that philosophy supplies a unique safeguard. Philosophical training is training in the right handling of conjecture; it fosters that habit of mind which regards an apparently inspired guess not as a release from thought, but as a call to close and careful mental effort. It develops an acquired instinct to examine every hypothesis, and to rest content with no piece of guesswork

that has not been verified as closely as possible. It does for teaching in general what training in approximations does for the teaching of mathematics: it induces a keen sense of the limitations of accuracy. We all have a tendency—it saves trouble—to teach that this is so, and that that is not so; and thus we tend to foster in the minds of the young the idea that nearly everything can be put in terms of a simple positive or negative. But the truth is very different in real life. This is not to say that strong and definite and right conclusions cannot be worked out in real life. But most of the truths of real life—the ‘practical’ as well as the ‘theoretical’ truths—are of a relative kind, and can only be justly worked out by those who have learnt some appreciation of relativity.

The proper study and appreciation of relativity, though not, of course, the whole of philosophical method, is a considerable part of it, and from the educational standpoint the most important part. It is the controlling factor in sound thinking; and it needs to be developed in every department of thought. The development of a true sense of proportion—for that is what it comes to—necessarily takes time, and can hardly be begun too early. The stage comes very early in a child’s mental life.

when he begins to ask 'Is it true?' of every myth or fable. It is not an idle question; the child really wants to know and understand the curious and puzzling problem of Truth, and he responds with eagerness to an attempt to elucidate the problem in simple terms. The gradual transition from the teaching of history by story-telling to the teaching of historical sequence and causation furnishes an excellent opportunity for comparing, step by step, the relative truth and value of historical data. In the use of language, again, the question of relative accuracy in statement needs to be explicitly considered, taking the simplest possible examples to start with: the essence of the matter being always to consider not only what is said, but why it is said, and with what truth of relation to the speaker's or writer's thought and intention. In science—to complete our usual triad—we find the best and clearest comparisons between relative and absolute truths; by learning to apply simple scientific method, in the widest sense, a child begins to know a real absolute when he sees one and to avoid that snare and delusion, the fallacious absolute.

It is extremely difficult in school life and work

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to give proper scope for development to one of the most important of the human faculties. In

tracing the value of educating a sense of relative truth in children we must not leave the question of method to rest upon general considerations.

Training
the power
of choice.

This is not sufficient. It is not difficult, for those who make the attempt seriously, to train up children whose cast of mind is that of the young philosopher without being that of the young prig; but it is difficult to inculcate in children a simple philosophy which will be more to them than a kind of mental pastime. The reason is that scholastic method, while it offers plenty of opportunity for the application of thought and judgment in the intellectual region, offers comparatively little in the region of will and character. In school, most of a child's decisions are made for him; out of school, the decisions which he is free to make for himself bear little relation to the elementary principles of judgment that he is (or should be) beginning to formulate in the course of his school work. There is a division between the theory and the practice of judgment.

This is a fundamental matter. When St Paul wrote 'The evil that I would not, that I do,' he

was giving voice, not only to a universal cry of humanity, but to his revolt from the residual vestiges of his training as a Pharisee. All education is in danger of being Pharisaical, to this extent: that it tends automatically to keep theory of conduct in a compartment separate from conduct itself. In so far as it trains judgment, it tends to train it apart from opportunity to give effect to judgment; and experience teaches that principles learnt *in vacuo* have very little influence upon character. Training in judgment is of little value unless judgment can be translated step by step into will, and will into action. But here there arises a very real difficulty in school method. It is hard enough to get through the prescribed term's course with a class of children who are entirely docile and simply do what they are told in all particulars. We are tempted to discountenance rather than to encourage any emergence of will as a nuisance and a hindrance to the progress of work. But this is a confession of weakness; a confession that we are unable to train the mind and the morals at the same time, that we cannot even attempt to be rid of the false division between the two. And our difficulty, though real, is not without a solution. Perhaps a hint of the solution

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can best be expressed by saying that we have to give all the scope and exercise that we can to the child's power of choice. Those who have no practice in making personal choice between one judgment and another are little to be blamed for errors of judgment.

We need a system of teaching that will very greatly extend the opportunities for training a child's power of choice; but we cannot have a system in a moment. There is the usual difficulty of substituting the inner for the outer discipline, that an interregnum between the two has to be avoided. It can hardly be insisted upon too strongly that it is the duty of every individual teacher to help to pave the way for a gradual and organic change. Children have to become capable of choosing to learn, of choosing, in co-operation with the teacher, what are the best methods of learning, and of choosing rightly what thoughts and opinions to frame about the things that they are learning. But they cannot have freedom of choice all at once; they have first to develop responsibility of choice, and in this the teacher has to help them step by step. Broadly, freedom of choice can be given as soon as there is a readiness to take pains and to choose those activities that will involve

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taking pains. Here the responsibility devolves upon the teacher of making it interesting to take pains for the sake of obtaining a thorough grasp of the meaning of a subject. If this is done, children will not choose for themselves the easy and superficial way and will not have to be driven or dragged to the necessary spadework.

The first broad rule of method is that any alternatives as to the handling of work that occur to the teacher should be referred to the class, and that suggestions should be invited. Children value the opportunity to make serious suggestions that they know will be considered on their merits, and, their personal interest thus engaged, are very ready to attend with understanding to a careful explanation why their suggestions will not work or will need to be improved upon; while the occasional acceptance of a suggestion *in toto* is a small triumph for the suggestor. This involves a gradual training in the solution of the problem that besets us all when we tackle the work of everyday life—the preliminary problem of how to set about it. But it does more than this: it gives practice to the general power of forming a right judgment with a view to acting upon it, and also trains an ability to form a right judgment in co-operation with others,

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to find the right expression for one's will as part of a collective will.¹

The second broad rule is to give every reasonable scope to the expression and discussion of individual opinion. This may seem a hard saying to the teacher who lives in dread of wasting time; but time is not wasted which is spent in helping children to form their own opinions—one of their fundamental duties in after life. Both the opinionated and the diffident have much to gain in the process; the one learns to choose his opinions with some reference to other people's, and the other to decide what he really thinks and to put it forward. And as a mere question of getting through an allotted sequence of work, time methodically spent in the discussion of individual ideas is not wasted. As has been suggested in an earlier chapter, class discussion brings misconceptions to the light, and their prompt removal is a definite saving of time for the immediate future; and the keenness of interest that is engendered has a qualitative value that can also be expressed in terms of class hours.

I would suggest that many teachers who are averse from sudden and drastic change might feel their way, by methods of this kind, towards the fuller practice of self-government in school described by Mr Caldwell Cook in *The Play Way*, and (for older pupils) by Mr J. H. Simpson in *An Adventure in Education*.

But the paramount value is that the child's power of choice is being recognised, and trained to its proper expression and its proper subordination; that he is learning to make his incipient philosophy of life a force, in its degree, not merely a system of pious aspirations.

The word ethics is sometimes taken to mean a flat and colourless substitute for religion. I shall use it here as meaning that science of morals

which has to be worked out in accordance with religious teaching. The subject of ethics is dull and lifeless in proportion as it is divorced, on the one hand, from the philosophical outlook which we have been considering as an essential of education—the outlook that represents the proper development of a child's perpetual desire to ask 'Why?'—and, on the other hand, from the religious outlook, which will be considered with relation to one or two points of practical teaching in the next chapter. We have seen the importance of giving scope for development to the child's power of choice. This question is bound up with the general question of liberty and with the inquiry that all advocates of liberty, for themselves or for others, must be

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prepared to meet: What do you want liberty *for*? What would you be set free to do? There is a certain amount of sense in the idea of liberty for its own sake, just as there is a certain amount of sense in the idea of art for art's sake, but both ideas partake of the perilous nature of any doctrine that rests upon a half truth. And in both cases the other side of the truth is the duty and the joy of service, without which neither artistic nor moral liberty exists in any real sense.

✓ Ethics might almost be defined as the science of service; at all events, that definition will cover its primary importance in the educational region. It is from this point of view that we can see most clearly how to systematise the ethical principles and conclusions that continually emerge in ordinary school work. For the usual trouble is not that we neglect ethical concepts; some teachers conscientiously over-emphasise them, and try to make up for lack of systematic treatment by wealth of platitude, to the great boredom of their classes, though there are also teachers who, disliking platitude, tend to fight shy of ethical conclusions altogether. In either case the pupil is learning to form a low opinion of ethics, and the principles that do find a lodgment in his mind are sporadic

and disconnected. We need some central principle of an unsophisticated kind, possessing a natural appeal to the childish instinct for good, around which ethical considerations may be grouped; and the principle of service is one of simple and universal application. It is the principle that rescues ethics from the accusation of being only a kind of moral utilitarianism. The majority of children have a strong and a commendable distaste for the ethics of the self-help school.

Regarding ethics as the science of service, we may usefully trace, in connexion with the historical aspect of everything that is learnt (not only with the official 'subject' of history), the development of the idea of mutual service in civilised life. In a sense, the story of the rise and fall of civilisation in its different phases is nothing but the story of success and failure in effective mutual service. The feudal system stood as a social contract, chivalrously interpreted, and fell as a system in which—as, particularly, in pre-revolutionary France—effective service was all on the one side, the side of the dispossessed. The industrial revolution introduced a new ethical contract between

controlling, organising power and the power of simple productivity, and is vitiated by the shareholding system, in so far as a shareholder can be held exempt from contributing any value to society. Among ethical principles of general application, there is, perhaps, none upon which our future more depends than that everyone has to pull his weight in the boat, and that to be a non-worker is not a distinction but a disgrace; and an inner sense of this truth is not inculcated by preaching in general terms, but by working out its application to all phases of human life. It is important, when speaking of social contracts of all kinds, to emphasise the point that mutual service means mutual giving, and that there is both an ethical and a practical unsoundness in any system which is based less upon a common desire to contribute than upon the close-fisted bargaining that aims at getting as much as possible for nothing. The one gives to civilisation a surplus, the other a deficit, of productive energy.

To make so wide and general an application of the principle may seem to be making it too abstract for the comprehension of children; but this does not prove to be the case when the principle is carefully

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and simply brought out in the many instances that occur in the course of ordinary school work. It is important, however, to crystallise the different forms of the principle as they appear. For this purpose the composition class has invaluable help to give; and the teacher of composition should be glad to escape from the usual round of petty and futile essay subjects. Here, as in most of the method that I am advocating, the collaboration of teachers with one another is essential; and in this instance, as is often the case, it is of the greatest use to one teacher to see the results of his work as they shape themselves in the class-room of another. It is also good for children, especially when their ethical conclusions are in question, to bring their ideas to written expression apart from the direct influence of the teacher under whom they have formed them; they are less likely, then, to follow the common childish impulse to put down nothing but a crude summary of the teacher's own remarks, in the hope of pleasing him.

It is important that a wide and impersonal view of the principle of service should be developed, in simple ways, from the earliest stages; but it is also important that the application of the principle

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to small conceptions of personal duty should be brought out.

The narrower, personal view has to be developed as part of, and in relation with, an elementary understanding of the wider aspects; it must not be neglected. Here, again, preaching in general terms is of little use. Children need to build up a conception of the personal duty of service largely by an almost unconscious process of continual apperception. It is common to draw their attention in some detail—often with some clumsiness of application—to the personal ‘moral’ to be deduced from a school lesson, and to neglect formulation of the wider principle. The process ought to be reversed. It is the immediate personal ‘moral’ which children very readily apply for themselves, and rather dislike to have pointed out to them. The business of the teacher is not to avoid the pointing of morals, but so to point them as to leave free the learner’s own faculty of self-criticism—a faculty in which few, if any, normal children, sensibly trained, are deficient.

An association of the learner’s intellectual interests with a working philosophy of life, such as I have

been endeavouring to define, does not lead merely to an individual conception of ethics. As Civics. we have seen, it leads naturally and inevitably to the ethics of service. But it is not enough, though it is highly important, to develop the idea of social service as a principle and to illustrate that principle in every possible way. We have to look forward; to realise, and to make children realise, what the principle ought to do when it is applied to the world in which each will have to take his place. A sound and a valuable social ethic is developed by school life as such, if the school is at all a good one; but it is not often connected, unless on the occasions when a great event, such as the Russian Revolution, cannot be left without comment, with present social issues. The connexion ought to be continuous, not spasmodic. It is not a good thing that children should form an idea that only 'great events' are significant; and they approach these landmarks with the less comprehension if the study of continuous, slow-moving causes has been neglected.

This is obviously true of the teaching of history, but it is not enough that the sequence of history should be conceived (as it often is conceived in schools) as ending in a certain body of knowledge,

more or less interesting, and presumably, in some undefined way, more or less useful. The paths of historical sequence do not lead into the school, but into the world of social life; and not only history but almost every subject ought to be studied with some reference to that world. Without some previous elementary study, for instance, of local, decentralised government, children can make little of one of the most significant features in the Russian Revolution.

There are two reasons for the common neglect of civics in school work. One is a general inability to see how the subject can be 'worked in.' I will return to this point in a moment, only entering here a protest against the superstition that nothing can be taught in a school unless a period is duly partitioned off and labelled in which to teach it. This superstition is due, partly, to the long habituated practice of teaching things in watertight compartments, partly to old mistakes in appraising the 'results' of teaching in terms of the examination-passing or grant-earning capacity of pupils. The most important things that are taught in a school are taught by peaceful penetration of the compartment walls.

Another reason for the neglect of civics is that

teachers fear the accusation of 'putting ideas into the children's heads.' It is certainly true that one cannot teach civics without in some measure talking politics; every one has his own political views, and political bias is rightly placed under a taboo in school work. But it is not the educator's business, in any subject, to teach only what he himself thinks to be true. He has to give a broad idea of what has been, and is being, thought, and to show dispassionately the results of different people's thinking as they work themselves out in practice. Still more, he has to point out the painful results of neglecting to think at all, as, for instance, in the haphazard clumsiness of the arrangement of some local group of dwellings. It is difficult, we must admit, for a teacher to use his instances without displaying his personal views as to causes—as to the general question who is responsible. It is a useful rule for the teacher never to put forward a view of his own unless he also discusses, with scrupulous fairness, the views that are opposed to his own, and tries in simple terms to resolve the opposition. The class is thus learning to regard differences of opinion in a reasonable spirit, not being educated in the pretence that they do not exist.

The difficulty remains of 'working in' the subject of civics. It is, in part, the usual difficulty of time; and on this point there is little to be said that I have not said before. But it may be added in this connexion that considerations of social welfare and of social duty are particularly well fitted to help forward that general co-ordination of ideas which is in itself a saving of time. We have here the broadest practical issue of that philosophy of life which school work ought to teach, and an issue in which a large number of conclusions, drawn from different regions of school work, find their *raison d'être* for the essentially practical mind of childhood. Children need to see how faith in social service is justified by works, and how the lack of such a faith results in civic confusion. And the present is an excellent time for drawing conclusions that relate to social responsibility. There was formerly some ground for the plea that the modern social complex was too great a tangle to be unravelled for the comprehension of children. The war has both clarified a number of the major issues and given them a new urgency. War conditions, war problems, are in a sense artificial and temporary, but in another sense they drive us back to the social fundamentals; and a

plain duty rests with teachers to make sure that those fundamentals shall be remembered and applied in the time of peace and reconstruction.

Let us take the three bare ultimates of warfare—men, munitions, and money. Has not the social duty implied in each of these words its counterpart when we consider the duties of peace? Personal service of the community, personal courage and endurance, are needed for other tasks than that of fighting; a spirited productiveness is necessary if we are to have the means of building up good, no less than of breaking down evil; generous views upon expenditure for the common welfare, and self-sacrifice for the sake of that expenditure, will be as vitally necessary after as during the war. No one dreamed of the enormous potential productivity, of material and moral energy alike, which proves to have been latent in the national being; it is for the national consciousness as a whole to direct that tide of energy into constructive work, and the near future of this national consciousness depends in great measure upon the efforts of teachers to apply, by continual reference and illustration, the lessons of the war to the wider lesson of social obligation as a whole. Opportunities for doing

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so in school work, not merely without irrelevance, but in integral connexion with a number of school subjects, can be found in unexpected plenty by those who will take the trouble to seek them out.

CHAPTER X

A NOTE ON RELIGIOUS TEACHING

It is possible that much of the false antagonism between religion and science, faith and knowledge, is due to a heresy unconsciously instilled by ill co-ordinated education. We do not mean to teach, as part of the religious conception, that faith should always be jealous of knowledge, nor, as part of the scientific conception, that knowledge should be jealous of faith; yet this is what we very often do teach by implication. In the time allotted to religious teaching we make faith paramount, and rightly so. In the time allotted to the teaching of science we make the ascertainment of exact knowledge paramount, and in this, again, we are doing the right thing. But it is possible by a simple fault of omission to set these two attitudes of the mind permanently and dangerously at variance with one another. If we do not also teach how faith and knowledge can react fruitfully upon one

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History.

another, we are making of each a drag upon the other's advance. I have been tracing, in the last two chapters, a sequence of idea that connects exact knowledge with the intuitive faculties, and through these with philosophy and ethics. Leaving that sequence for the moment (I hope to show, directly, its eventual union with religious thought), it may be profitable to consider how religious teaching can be made to prepare a welcome, as it were, for the overtures of that science of service which we have been regarding as the most important outcome of scientific method in teaching.

The suggestion now to be put forward is that wise teaching of religious history is a sure means of approach to the desired union of reason and religion. In the controversy that raged—many years ago, it seems now—about 'simple Bible teaching,' mistakes were made by the extremists on both sides. It was a mistake to look upon religion as a kind of soup that could be ladled out of the Bible at will. It was equally a mistake to do nothing with the Bible but extract from it hard pellets of dogma, often against all warrant of historical truth, and to present these for children's swallowing. We have often seen the consequences of these two modes of religious instruction: on

the one hand, a nerveless, nebulous optimism masquerading as spirituality, on the other a dully tenacious reliance upon unreasoned formulæ, and on both hands a significant tendency to reinforce argument with Biblical quotations wrung absurdly from their context. Historical treatment of religion at least restores that sense of context the lack of which produces, at times, such painfully comical results. And with sense of context comes sense of perspective and proportion—the all-important consideration of relative truth, no less vital to the religious than to the philosophical outlook.

But there is a modern difficulty about teaching religion historically, not only the old difficulty of varying opinions as to the comparative historicity of different Bible narratives. The latter difficulty can be got over by allowing children to realise that about the Bible, as about everything else, no one knows the whole or the exact truth, and that any opinion which has been thought out seriously and in earnest has a right to be considered on its merits; not, it may be as well to remark, that conflicting opinions should be jumbled together in the mind, but that they should be sorted out, and that their degree of correspondence as well as of divergence should be explained.

The other difficulty relates to the modern evolutionary view of religious development, and besets alike those who are attracted by this view and those whose instinctive reaction is against it. Teachers who follow the course of the modern investigations of 'religious origins' (an unscientific phrase) feel rather like those of the last generation who read their Haeckel—that this is an aspect of things to be studiously kept out of the class-room. Teachers who resent these researches, because of the common tendency of the investigators to set process before human motive and impulse and so to 'explain' religion in terms of highly evolved totems and taboos, also become afraid to touch upon the historical development of religion. History appears to them, in this aspect, to be uncomfortably entangled with heresy.

But if so, it is precisely our business to disentangle it again. The heresy of Haeckel disappears under scientific and logical treatment, and we do not fear to teach children the atomic theory; the heresy that many find (or think they find) in 'The Golden Bough' disappears under genuinely historical treatment. Starting from the primary fact of the religious impulse in man, and keeping in their place the secondary facts about the developing symbolisms through which men have sought to

satisfy that impulse, we can trace through Biblical history an ascending scale of religious values, always distinguishing the right spiritual emergence from the crudities and flaws of its expression. To do this is to enable children to see religion as an essential activity of the human spirit, interwoven with the other activities of life.

This view is put forward as an essential justification of historical method in religious teaching; but I am far from suggesting that the historical is the only method to be employed. Leaving aside, as beyond the province of this book, the question what is to be taught as religion—the formulation of a body of doctrine, which varies with different shades of religious persuasion—we can say that the duty of all religious teaching is to foster, not a blind, but an understanding, faith: a faith that is in close relation with knowledge, and with every kind of knowledge. The relation between faith and works is sufficiently insisted upon in religion, and reasoned knowledge is not least among the works of man. Before touching upon the connexion of religious thought with other aspects of knowledge than the historical, I would insist upon the importance of keeping religion in close contact with history. History, both 'sacred' and 'secular,'

shows the development through manifold failures and successes of the principle of service; religion, if it does anything, reveals the inspiration behind that principle. To make the inspiration real, it is essential to connect it with those sequences of event through which we can see it in operation.

If school work should be directed, as it has been my endeavour to suggest, towards a gradual summation of knowledge and faculty in a philosophy of life and an ethic of service, it is the natural and only conclusion, granted that we are going to teach religion at all, that this summation ought to be drawn into a religious synthesis—a realisation that all knowledge is religious knowledge. If we make no attempt to establish that realisation, our religious teaching, however edifying in itself, however stimulating to the sense of moral beauty, becomes simply the inculcation of Sunday religion, which is Pharisaism. It is by a sound protective instinct that the normal child so readily shakes off, with a wriggle and a shrug of the shoulders, the impression that is made upon him by teaching of this sort: the feeling that religion is a kind of moral art-for-art's-sake. This is as bad as the

other extreme of moral utilitarianism, which the instinct of childhood also cordially dislikes.

We have to develop, in the schools, a view of religion as the highest expression of the ethic of service, an expression in which the service of man and the service of God become one and the same thing; and this means, from the point of view of practical teaching, that we have to bring together and weave into a unity all the threads of moral realisation that are drawn from ordinary school work. Religious teaching is either a teaching that brings everyday problems of service into the light of a belief in divine guidance and purpose, or it is a teaching that inevitably sets faith at variance with fact.

But in the practice of teaching, a stumbling-block is always in our way, which we have already encountered in discussing the teaching of social ethics. Differences of religious opinion are as acute as differences of political opinion, and their sharpness becomes obvious and painful precisely at the junction of religious thought with practical affairs. To-day, to take the big instance of lessons drawn from the war, the difference between those who take a militant and those who take a quietist view of Christian doctrine can pass unheeded as long as the subject of the war is left out

of account; but directly the patriotism of children is brought into relation with religious feeling so as to suggest a leaning to the one side or to the other, there is likely to be trouble. We can only urge what we have urged before, in the political connexion: it is the teacher's business to expound both views, in the form in which each is most reasonably and most spiritually held, and to do what we can to bring them into a unity.

It need hardly be said that we cannot solve completely, either for children or for ourselves, the great paradoxes involved in the relation of faith to conduct, and that our partial attempts should be made with full and explicit acknowledgment of their incompleteness. We do not occupy the teacher's desk, in the time allotted to religious teaching, so that we may issue pronouncements, but in order that we may give wider scope to the children's faculty of perception and their power of choice, in matters of faith and of the application of faith no less than matters that concern their intellectual development.

In religious as in intellectual training, however (to make a convenient distinction, not an opposition, between the two), it is not a question of trusting blindly in the child's power of choice,

but of educating that power by slow, careful stages, so that it may become fully worthy of trust. It is here that we can see the essential value of connecting religious knowledge with all knowledge. A child is not fitted to choose for himself among different doctrines, taken in the abstract; but he is able to develop the power of seeing doctrine in relation to life and character. As he learns to think about life as a whole, he can learn to see religious doctrine as pointing to the goal of all thought.

The question for the teacher of religion, then, is how to set behind every religious conception an array of thoughts, drawn from every region of the learner's developing intelligence, that naturally lead up to that conception. It is imperative, to begin with, that he should have a good idea of the work that is being done in other lessons, and should think out very carefully what are the small but fundamental conclusions that his pupils are drawing, week by week, from their secular work. It is these conclusions, these small germs of the childish philosophy of life, that he has to build into a unity with his own teaching. But it is not enough to look at the work of other classes than his own. He needs to take into account the

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whole of the children's environment, the influence of home and of locality, and to show a religious conception within which these things, as far as they have reached the apprehension of children, fall into their places and are comprehensible.

Such is the material that he has to work with, and only failure and artificiality can result from neglecting to work with it. The greatest of Teachers was not above using such material; and the Gospels are the best guide to that enlightening use of example and illustration which makes a familiar, homely fact instinct with new meaning. The teacher of to-day has a great wealth of opportunity in the embryo philosophies that children are perpetually constructing and reconstructing for themselves, the growth of innumerable seeds of suggestion that modern education is continually dropping into their minds. The teacher who honestly tries to follow the manifold workings, the problems and provisional solutions, of the minds for whose religious development he is responsible, and to give to those minds that which will harmonise and unify their thoughts, need have little fear of teaching children a doctrine that will be unreal to them because it outruns their philosophy. He will be teaching them religious knowledge, not merely religious formulæ.

CHAPTER XI

BEHAVIOUR AND THE USE OF FREEDOM

THERE is a convenient distinction, but no more, between the child as a being whose personal and social quest of truth, beauty and goodness education has to aid and encourage, and the child as an organism which, as a matter of observation, reacts in certain ways to certain stimuli. The first is his appearance to the educator as distinct from the experimental psychologist; the second is the aspect that he takes on for the psychologist as distinct from the educator. There is no difference in the child himself, and we know that there ought to be no opposition between the educator and the psychologist in ourselves. Yet there is an opposition. From the humanist standpoint, we rebel against the attitude that regards a child as a mechanism, the product of his evolution. It is the old, unnecessary quarrel between the mechanist and the vitalist philosophies. No scheme of vital faculty is complete which does not take

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into account the machinery by which faculty comes to expression; the only mistake is so to fall in love with the psychological machinery, as soon as we have discovered it, that we think it explains everything. In point of fact, it only explains itself. None the less, the explanation is sufficiently fascinating; and it is my purpose, so far from decrying its fascination, to suggest that we have here a region of interest that ought not to be the preserve of teachers alone, but should be opened up in some measure to children.

In matters of character and conduct, children are apt to be either too happy-go-lucky or, in rarer cases, too introspective. We prefer the former alternative; the natural carelessness of childhood is healthy, and introspectiveness is morbid. Still, carelessness of character is not a good thing; we want carefulness, personal conscientiousness, without overmuch introspection. This can be attained if we give a little attention to teaching the science of behaviour, encouraging an approach to the personal problem from the impersonal point of view.

Two related aspects of that science may be specially dwelt upon. We can speak of acquired

habit and tendency as it exists, resulting in behaviour that is at times almost pure reflex action; and we can speak, in a scientific as well as in a homiletic spirit, of the natural origins of habit and tendency, and of the natural means by which those habits and tendencies can be modified whose reflex results do violence to the sense of fitness and right. This, side by side with ethical and religious teaching, can do much to dissipate the common childish despair of ever 'being good.' A child needs to know something about the complex moral (and amoral) constitution that he inherits, and has to mould for himself, if neither his sense of personal responsibility is to be overburdened nor his conscience dismissed as being too unreasonably exacting a taskmaster.

Among the questions of human conduct that arise in the course of school work—in history, for example—there are many that involve a determining crisis of character. These are wasted as teaching material unless we take both the determining factors into account: the act of conscience and will that dramatically emerges to mould the situation, and the inner struggle that may be traced, often with fair

certainty, as being likely to have taken place beforehand. This is a commonplace of ethical teaching; but there is a difficulty, for children, about the nature of the inner struggle. Their own experience is, in any small crisis of judgment and action, that they either do the right thing or they do not, almost automatically, whatever they may think of their own behaviour upon subsequent reflection.

This apparently automatic nature of a right or wrong decision represents a fact of experience, and a fact that ought to be explained. If it goes unexplained, a child is apt to conclude that his own moral fibre cannot possibly come up to the standard expected of him, and this conclusion makes him either introspective or morally callous. It is here that we find help in teaching the scientific fact that moral behaviour is, in one of its aspects, identical with the unthinking reflex behaviour of an animal. This, taken alone, is a repellent doctrine; it is a half truth, and a half truth easily hardens into an untruth. But it is a half truth that becomes impressed upon the child's mind, consciously or unconsciously, by his experience; and it is the business of education not to neglect awkward half truths, but to expand them into

whole truths. We can carry the mechanist doctrine that behaviour is all a matter of reflex action a good deal further by inquiring, and teaching children to inquire, what it is that determines the bundle of reflex motives with which we find ourselves equipped or encumbered, at any given moment when a moral decision has to be made. The answer is found in a consideration of habit, and of the multitude of small, perhaps unnoticed, previous decisions through which habit has been formed and character moulded.

The result is to restore personal moral responsibility to its rightful place by showing its twofold nature. A moment of moral decision does call for an act of will and a demonstration of character, but that is not the whole of the matter. The rightly disposed will is often paralysed, as the child is inarticulately trying to explain when he cries, 'It wasn't my fault—I couldn't help it.' The answer is to inquire why it was that he 'couldn't help it,' not with the idea of driving home a conviction of guilt (this only gives a child an evanescent feeling that he must be a moral imbecile), but in order to show what has gone wrong in the past that accounts for the present failure.

It is of little use, however, to confine this sort of inquiry to personal delinquencies. Children need to realise, and can realise, through the general course of their teaching, that responsibility for habit and tendency is one of the fundamentals of character. This is the development, in the moral region, of that sense of time-perspective which education too often neglects. Every crisis of character about which they are taught should be treated not as an isolated success or failure of human virtue, but as the consequence—often the inevitable consequence—of a chain of previous successes or failures. The analogy of physical and mental fitness for emergencies takes a natural place in developing and confirming this principle, the principle that individual responsibility is never confined to a moment, but is revealed by the moment for what it always has been. It is my experience that this principle, simply and continuously worked out, both engages a strong and responsive interest in children, and also is of service to them in understanding their own personal difficulties.

The principle is also necessary for an under-

standing of personal liberty, which is the freedom of one's whole personality, not merely of one's momentary moods. But here we have to

Social beware of the modern danger of senti-
liberty. mental personality-culture, resulting in the spirit that says, 'I will to do this, because

I am I.' Germany said that; and we see the consequences. In a sense, the war has made us more afraid of liberty than ever. Yet the ideal of education for liberty goes hand in hand with the ideal of education as a more generous equipment for life, in our thoughts about the educational renaissance which the war is bringing about. It is natural that it should be so, when we are in the midst of a "war for liberation." We have distrusted the exponents of education for liberty; there has seemed to be a taint of sentimentalism in their views, a softness, an easy-going quality that would make for the false liberty which is enslavement to self. But it is easier, now, to see liberty as something that calls for hardihood, regimen, and sacrifice. We need to develop the idea in the schools that liberty has to be won, not passively accepted; we need to teach a philosophy of liberty. It is a subject that puzzles children. It is a subject that puzzles us

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all; for 'liberty' is one of the words that refer to a primary emotion, too large to bring within the compass of a definition.

The war itself raises one of the chief paradoxes of the subject. In this war, as in every war, all the peoples engaged are told, and believe, that they are fighting for liberty. This is not a fact to be kept out of the schools, merely because so much play is made with it by the pacifists. It is a puzzle, and a puzzle that has to be solved, for children and for ourselves, unless we are to accept the pacifist doctrine that it is insoluble, and that therefore we are all fighting for nothing. We can explain that the nations are, in a sense, all fighting for liberty: in the sense that each is fighting for its own idea of liberty. The same question has always to be asked about the demand for liberty—What would you be free to do? We cannot afford to allow freedom to a criminal or a lunatic until the desires have changed for which he would use his freedom. We cannot afford, the world cannot afford, to leave Germany free to be Germany, until the fact of being Germany has ceased to involve a desire to terrorise the world. This is a simple enough point for children's comprehension; and it is a gigantic instance of the first principle of liberty.

It is not enough merely to claim freedom to be oneself.

But the principle can be carried further. Over against the positive evil of wanting to be the wrong kind of self we have to set a positive good which is its opposite. What is the right kind of self, whose demand for liberty must be conceded? This is what children need to know, if they are not to grow up with one region of their being permanently, if vaguely, rebellious. There is a negative, compromising formula which, again, is insufficient: that anyone may justly claim freedom to be himself if he does not propose to hinder other people from being themselves. This is merely to preach avoidance of an evil without attainment of the corresponding good.

For the formulation of the positive good we can turn, as a beginning, to the lessons of natural science. Here all vital advance is seen to depend upon increasing interrelation, increasing co-operation and harmony of function. Evolution presents itself as the winning of freedom through vital partnership. The struggle for existence is only superficially a struggle of creatures against one another; fundamentally, it is a struggle for effective mutuality. We are not teaching science

at all unless we are bringing out this fact, in the light of which 'Nature, red in tooth and claw,' is seen to be nature in the throes of adjustment to a great purpose of fellowship. The process is painful; the whole paradox and mystery of pain and evil is involved in it; but the line of advance is clear. Liberty grows with increasing interdependence; none of the higher organisms can be themselves without the co-operation of a multitude of others. And they must give as well as take. In the long run, evolution leaves the beast of prey behind.

This mechanism of vital advance illustrates, or expresses, a spiritual reality. We can trace it as a fact of human experience, in history and in contemporary life, that the only real liberty is social liberty. The answer to the stock question, 'Liberty to do what?' is often given in the form, 'Liberty for self-development,' or 'Liberty for self-expression.' But there is no such thing as isolated self-development—the Ego unimaginably extending itself in quantity, without the opening up of new relations that brings about qualitative change. And self-expression merely to and for oneself would be entirely sterile. A boy can take a pleasure in whistling to himself when he is alone,

and a poet can take a pleasure in writing a sonnet for his own eye and ear; but both are performing to a potential audience—why else is whistling, or writing verse, a relief from the sense of loneliness?

We have to press our inquiry a little deeper and ask, To whom, and for what, do you wish to express yourself? And to be able to answer that question is to have graduated, to have become worthy of the particular liberty that is desired. Often the answer can only be in general terms; we need liberty to experiment, to venture, to develop a capacity for fruitful variation which we can feel better than we can define it; but some definition is demanded of us. A scientist does not let his son loose in his laboratory without some idea what the general trend of the boy's experiments is going to be.

Thus far I have sketched, in an elementary manner, the main principle that has to be worked out in the practice of teaching, if children are to understand their own desire for liberty and its bearings in the social order. It is worth while to make sure that an understanding of the problem of liberty is desirable for children. We very often treat their instinct for liberty either as a feral

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symptom to be repressed, or, at the best, as a natural but an entirely vague impulse that can only be left to muddle through. But it is possible for children to develop a working philosophy of liberty, as it is possible for them to develop a working philosophy of life in general: and this not to the detriment, but to the manifold advantage, of their school life and work as a whole. It is surely a pity to bring them up to be alternatively (or alternately) trained automata, or vague mutineers, while such a possibility exists.

I am suggesting the systematic teaching of the principle that true liberty is, in its essence, a social rather than an individual privilege—that the justified claim to freedom is not only the demand for self-development, but for self-development in the power of effectual co-operation with others. If this principle appears to tie the wings of liberty, it is our ethic of service that is at fault. Once service has become an inspiration rather than a duteous drudgery, freedom to serve effectually is the highest freedom. Indeed, all the other forms of apparent freedom lead into blind alleys, into various forms of enslavement to self.

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Liberty might be defined as the union of personal self-determination with the spirit of service. The only danger of the definition would be the danger of putting an illiberal interpretation upon the term 'service'—an interpretation by which Shelley would have been conceived as better employed in producing tracts or keeping the books of a bank than in writing the ode 'To a Skylark.'

We must not interfere with the self-expression of a potential Shelley or Rousseau; but the anti-social faults of a Shelley or a Rousseau, like the anti-social faults that he can detect in a prosperous banker or a respected organiser of charity, are capable of being transformed by education. By taking thought, we can establish a habit of mind through which the common opposition of liberty and duty, as though there were generally a choice to be made between the two, is convicted of falsity. As we develop an ethic of service, we can show that freedom without service is an illusion. But this principle, like all fundamental principles, has to be shown as it operates in reality, if it is to take root.

I have suggested that natural science must be so taught as to show how liberty and self-expression depend for every stage of advance upon increased

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co-operation. To have life and to have it more abundantly is to enlarge one's interdependence with other lives. This truth, seen at its highest in the Christian doctrine of fellowship, needs to be worked out in its lowlier aspects as well. It can be traced, for children, in the physical evolution of living creatures. The time when protozoa first clumped themselves together into a colony can be taken as the first great turning-point in the evolution of organic form and function, the preliminary step for the development of organs, through interrelation, into increasing sensitiveness and power. In practice, it is an incentive to children's interest in the processes of life to trace the evolution of more and more highly organised species in terms of the fulfilment of a primary law—the law that extended freedom of function depends upon a kind of social unity within the individual. And in teaching the laws of health, we can point out that disease is the impairment of this unity. These are not dull abstractions, for children; it is always important to remember that children delight in the unifying abstraction, simply and picturesquely presented. They need abstractions, as we all need them, to hold ideas together; they have not yet learnt, and can be saved from learning, to leave all the central,

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unifying thoughts about life to be discussed in technical terms by specialists.

A second turning-point in natural history is the manifestation of the social impulse between living creatures. It is a good thing always to dwell upon the question whether any given creature is social or solitary, and thus to work out the simplest characteristics of social life—never forgetting to inquire what services are rendered by one member of the community to the rest. The higher evolution of man may be dated from the time when he became a social, not a solitary, creature, and the wide divergence of man from the brute creation in liberty and the power of self-expression may thus be referred from the beginning to his stronger social propensities and his greater inventiveness in devising means of intercommunion and co-operation.

Here we enter upon the province of human history, where it is useful to keep one simple principle to the front, and to apply it upon all relevant occasions; the principle that liberty is always misconceived as freedom from one's neighbour, and only comes to fruition as freedom with one's neighbour. Most of the failures of civilisation can be traced to an attempt to find a short cut

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to liberty by leaving other people out. The Greeks left out, while they lived upon, their slave class, and became parasitic; the Romans, in their decadence, left out and lived upon their subject peoples. The rulers of pre-revolutionary France left out their proletariat. England learned a salutary lesson from the attempt to leave out America, and the unlooked-for nature of its success. The Central Empires seem to have made the final and monstrous blunder by designing to leave out all the rest of the world.

As the result of that blunder we are now waging a war, not of conquest, but of conversion; and in teaching the lessons of this war it is well to direct children's minds to an implication with regard to liberty that goes beyond the war itself. We have a great possession in the figure of the ideal Prussian, antagonistic to everyone's freedom except his own. He is so magnificently wrong that he furnishes us with a standing symbol of all that makes true liberty impossible. There is a certain type of behaviour that can be marked down, in history, in all that we teach about government and social conditions, and in our treatment of immediate problems of conduct, as falling distinctively into the Prussian category. Prussianism is a useful label

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for a poison, of which we are not likely to have seen the last (it can take other than military forms) when the war is over. We have an opportunity now to develop a keen scent for it in the schools. We need a generation trained to detect, whenever and wherever it arises, the spirit that uses order and discipline, essential for the social liberty which we desire, only to disrupt them in the end by making them intolerable. Children can learn to realise that there is a Prussian in all of us, eager to impose himself upon his neighbours rather than to serve them, and that we can approach freedom only in so far as we can exorcise him.

CHAPTER XII

THE SYNTHETIC METHOD

THERE is only one common meeting ground upon which the teacher and the taught can find themselves completely in accord—the ground of a common desire to work towards an understanding of everything. Children do not see the point of taking real pains to learn this or that thing; and, indeed, the point is often sufficiently obscure. Hence many of the modern schemes for beguiling them to work by turning work into a kind of play¹; the disadvantage of these is that children very soon learn to distinguish the jam from the powder and to leave the powder behind. And there is something wrong with any method which allows the tacit assumption that knowledge is unappetising in itself. The mind of youth has, in point of fact, an enormous appetite for knowledge; but

¹ I say a *kind* of play ; real, whole-hearted play methods, in appropriate subjects, are another matter, and a matter of high promise for the destruction of formalism.

we commonly fail to make it clear to children that the things which we teach are knowledge, in any sense that is intelligible to them. Not long ago an intelligent public school boy was trying to explain to me the difficulty of taking an interest in school science. As the son of a business man whose knowledge of applied chemistry has been of notable service in the war, this boy has better reason than most to understand the importance of science; but this importance seemed to have become unaccountably veiled by the method employed upon the modern side of one of our great public schools.

Further inquiry brought to light the fact that last term's science work had consisted in two separate and unrelated courses—a course of inorganic chemistry taken from a text-book, without experimental work, and a course in one branch of physics, taught by experiment without theory. No relation between theory and practice was being established in either 'science,' and the two were not correlated in any way either with one another or with anything that was being done in other classes. This is not an exceptional case. We must not be blind to the fact that work of this kind is being done far and wide, by conscientious teachers

who know no better. We continue to teach sciences, not science; languages, not language; histories, not history. These things that we are teaching are not knowledge, but information; and to a great extent they are information in which the learner has no reason to take an interest. They offer no satisfaction to that desire to understand the universe which is strong in every child. And the overcrowding of the curriculum is precisely the multiplication of these unrelated studies. The synthetic method aims at effecting a dual reform. By presenting knowledge as a whole, and information as standing in an explicit relation to that whole, it can make the learner realise that the quest of knowledge is worth his pains; and by systematising knowledge it can make information easy to refer to its proper place in the general scheme of things, so that the facts that are learnt and the thoughts that are engendered become an army, not a mob.

The science master who is teaching inorganic chemistry out of a book as one 'subject,' and experiments in physics as another 'subject,' would probably view our suggestion that science should be made to include the elements of all the sciences as extremely unpractical. It would imply, for him,

a demand that a new class should be instituted for the study of organic chemistry, another for botany, another for electricity, and so on in endless series—very likely with separate and unrelated arrangements for the theoretical and the practical sides of each 'subject.' It is to this attitude of mind that we have to refer almost the whole difficulty of the overcrowded curriculum. The pigeon-holing of the sciences is only one instance of the fundamental mistake, but it is the easiest and the clearest instance. It is obvious that the teaching of a large number of separate sciences is impossible, and that the teaching of one or two, as in our present example, cannot be made to rest upon any broad basis of scientific comprehension. The first question is how to teach science as one subject, not as an agglomeration of subjects. But that is not the only question. The real difficulty is that a change of the mental attitude towards knowledge is necessary before teachers can see the need for a synthesis of subjects. It may be of use to follow our example of the teaching of science a little further, in order to consider what we mean by scientific knowledge as distinct from scientific information.

It is in the direction of broad scientific knowledge

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to have realised, for instance, that all life is dependent upon plant life. The cycle of change and interchange, beginning with the work of the leaf cell, upon which the nourishment and the energy-production of every organism depends, is a fundamental fact of Nature, and a fact that stimulates inquiry over a wide range, from laboratory experiments to the working out of a philosophy of natural law. But how many science pupils are even aware of this fact? It is relegated to the pigeon-hole of biology, a 'subject' which we have not time to teach. Yet if we can once avoid thinking in pigeon-holes, and begin to follow up this one root fact with all that it involves and implies, we find ourselves teaching half a dozen sciences at once with complete naturalness and coherence, and making what we teach interesting and memorable, because it is all rooted in a reality. The first general rule of the synthetic method, for science teaching and for all teaching, might be stated thus: for every course of lessons, start from a fundamental reality that the learner can see to be significant, and let knowledge grow through the steady investigation of this reality and of the problems that are involved in it.

The first object of the synthetic method is to melt away the partitions that keep school subjects in separate watertight compartments. It would

appear that these partitions have
 come into being as a safeguard;
Synthesis and they at least ensure that the teacher
"Subjects." shall teach something (though they

do not ensure that the learner will learn anything) in the period allotted to a given subject. According to the philosophy of education which I have been endeavouring to suggest, the teacher ought to teach everything, treating each subject as a particular angle of approach to an understanding of everything. But there is certainly a danger that if we abolish the subject-partitions in a hurry, creating no alternative safeguards against discursiveness, our lessons may become mere entertainments through which we shall teach nothing. Most of us can recall examples, from our own school-days, of discursive teaching that was admirably conducive to thought, but never carried thought to any destination. We may none the less look back with something of gratitude to the form master who was less a teacher than a talker, and cherish an idea that he did to some extent open up our minds, which the methods of

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other teachers kept obstinately closed; but the fact remains that he left us with little sense of getting anything done. We need a method that combines discursiveness—if the word may be used in its literal, not its comminatory sense—with co-ordination of the thoughts over which the discourse ranges.

I have suggested one safeguard: the choosing of one central, significant idea around which to group any given body of subject-matter. A number of such central ideas have been put forward in earlier chapters. The idea of European language-structure as a unity, branching out into a diversity of related languages, is of great interest to children (children are always interested in questions of growth and structure, intelligibly explained), and its consistent working-out enables them to learn languages with surprising ease. The idea of history as the story of man's attempts to organise an effectual system of mutual service not only makes history significant to the learner, but opens up natural connexions with geography and economics, with civics and morals, so that history becomes, as it ought to become, one of the aspects of everything. These are major instances of central ideas that children can learn, step by step, to realise

and to make their own. Every group of lessons should also have its minor centre of generalisation. We have here to contend with the common superstition that children are not interested in, or are not capable of, generalisations. In my experience they are interested in little else, if by generalisations we mean anything more than dry formulæ; our teaching becomes suggestive and memorable precisely in the degree to which we can make it point to broad, simple, and fundamental ideas. A very able engineer was lately heard to complain that he found it difficult to take in any highly generalised idea that could not be expressed by a mathematical formula. There we have the mind whose power of generalisation has found development only within the partition walls of mathematical training. How much of our general incapacity for organisation is due to our lack of training in the art of seeing problems as a whole?

There is a second safeguard against the wrong kind of discursiveness in the systematic co-operation of teachers with one another. As a matter of the mere mechanism of instruction that co-operation is invaluable; the most elementary experiment in teaching two subjects in relation to one another,

each teacher seeking out points of connexion with the conclusions that are being worked out by the other, should convince anyone that we have here a type of method which it is criminal not to develop as fully as possible. And there is the further consideration, from the point of view of the synthetic curriculum, that teachers can thus find out the natural limits of their subject-range, as distinct from the artificial limits imposed by the partitioning off of subjects. The fear that, directly the partition walls begin to grow nebulous and to disappear, the teacher will wander vaguely from one topic to another, sacrificing all grip and reality, is seen to be illusory if we envisage him, with his class, as surrounded by other teachers with their classes, of whose activities he is fully aware. He will not wander off into the void, but will reach out to establish links of connexion and understanding with everything that is going on in the school.

There remains the task of the head of the school, to think out the synthetic time-table and to keep it in being. This is not so formidable a task as it appears at first sight, given the co-operation of an intelligent staff. And it has the advantage of being a task that can be undertaken step by step. No sudden upheaval of existing methods is necessary.

First one group of subjects and then another can gradually be wrought into closer co-ordination by calling the teachers who are concerned into council. An excellent beginning can be made by a consultation between the head and the teachers of languages upon the Report of the Joint Committee on Grammatical Terminology. (Murray, 6d. net.) Discussion of the teaching of historical periods in rational sequence is urgently needed in most schools, and should be carried further to include a consideration of world history and its connexions with science, geography, literature, and Scripture. A unified scheme of science teaching is not worked out in a day, but the sciences can be brought into increasingly close relation with one another and, for a beginning, with geography and mathematics. A friendly critic of these pages has put forward the view that we shall not arrive at a general acceptance of the synthetic method without a cut-and-dried scheme which can be put into a text-book. Much can be done, when once the main principles of the method are taken for granted, to describe its technique in fuller detail; but it is not a method to be pursued by rule of thumb. To be effectual it must be created by those who use it, starting, in each school, from the conditions that they find in being.

Throughout the foregoing chapters I have been upholding one principle of method in a variety of aspects: the principle that knowledge not only

can and must be taught as a unity,

**The unity of
knowledge.**

but cannot be taught otherwise.

The difference between lessons

that are superficially learnt, only

to be forgotten as soon as they have been 'heard,'

or as soon as an examination has been passed,

and lessons that are assimilated into a growing

body of knowledge, is fundamentally a matter

of connexion. This is no new doctrine; but it

is a doctrine still much neglected in the practice

of teaching. I have endeavoured to trace some of

the reasons for this neglect, the very real difficulties

that beset the teacher in an attempt to draw know-

ledge into a unity. The difficulties are perennial.

At every stage of its advance education is in danger

of becoming congested by the inevitable increase

of the subject matter with which it has to deal.

The remedy is always of the same twofold nature.

We must simplify; and we must synthetise.

What is implied by these two terms?

First, as to the meaning of simplification in

teaching. The apparent complexity of any sub-

ject or group of subjects is the lack of understood

relation between its component parts. In the same way, a piece of machinery looks simple to one man and highly complicated to another, because the first man knows how its different parts work and what they are there for, while the second man does not. To make the machine simple to him we have not only to explain what each separate part does, but why it does it; that is to say, we have to explain the relation of the parts to one another and to the whole, and, in general, what is the principle or system of principles upon which the machine acts. It is a cardinal mistake to suppose that it is the details that are simple and the principle that is complex.

So, that we must simplify our teaching does not mean that we must practise talking about small details in words of one syllable, but that we must teach principles, and be watchful never to present a detail except in relation to a principle. Undoubtedly this precept, 'teach principles,' makes a demand upon the teacher. It means that he has, first of all, to see principles for himself, and to see them with that freshness of outlook which will give vitality to all that he has to say about them. In the second place, he has to study how to build up a principle step by step, working

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in the meaning of every detail as an integral part of the structure. All this involves a demand upon the teacher for original thought and insight; but teaching is a dull profession precisely in so far as it fails to make that demand upon any individual. And if we want to teach children to think, the least we can do is to think ourselves.

By simplification, then, I mean the thoughtful and gradual elucidation of principles. At each stage of a child's development there must be a sufficient structure of ideas in his mind for him to apprehend any detail as part of a whole: ideas about the purpose of the work that he is doing; a clear understanding of the method upon which he is being taught (this is most important in the interests of co-operation between teacher and pupil); and a definite mental plan of all that he has learnt hitherto—not a mnemonic plan, except in the sense that a grasp of sequence and relation is the only reliable mnemonic. But this grasp of sequence and relation can only be very imperfectly evolved by the study of subjects in isolation from one another. The principle of synthesis is necessary before we can carry out in full the principle of simplification through structural thinking.

In the synthetic principle, as we have seen, there

is comfort for the teacher who shrinks from the task of working out the structural simplification of subjects all by himself. It is infinitely easier to trace the structure of related ideas as soon as they can be followed through their natural connexions from one subject into another; and it is infinitely easier for the average teacher, who has not taken all knowledge for his province, to grasp the unity of knowledge through discussion with his colleagues, rather than by the racking of his own solitary brain. The establishment of an effective scheme of correlation through continual discussion among the staff of a school is not only good for the classes; it is good for the teachers. It helps them individually by encouraging breadth of outlook and counteracting the tendency to get into ruts; and it helps them collectively by ensuring that there shall be a unity of treatment underlying the diversity of their subjects and methods.

Diversity there must be, both in the subject matter of education and in the mode of its treatment, and an ever-increasing diversity. That is a condition of the evolution of knowledge. Our task is to find the principles of union which will prevent a diversity from becoming a dispersion. The multiplication of formal 'subjects' is the way

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of dispersion, and the way to the realisation of the unity of knowledge lies in the teaching not of more and more 'subjects,' but of knowledge as knowledge, viewed along a few main vistas such as those of language, history, and science. If we look after the principles of knowledge, and aim at building them up with increasing clearness and shapeliness, information will look after itself, and will fall of its own accord into its proper place in the main structure. So of the activities which are necessary for the development of artistic and constructive faculty; if we teach principles they find their place, and if we co-ordinate knowledge into a whole they become an integral part of that whole. The further evolution of educational method depends now, as always, not upon our power to teach an increasing variety of set subjects, but upon our power to develop that type of understanding to which no subject is alien.

PART III: THE UNEXPLORED MIND

I

THERE is undoubtedly a gap, as a critic¹ observed in reviewing my *Permanent Values in Education*, between the sound principles that the great educators laid down and the available means for their realisation. Human inertia counts for a great deal, and the muddle of our social order counts for a great deal; but it is the business of education to dispel human inertia and to start the reformation of the social order, not to demand a humanity so reformed and ordered as scarcely to need educating. Comenius and Froebel have shown us an education that would sow the seeds of far-reaching reform, and we have not succeeded in applying it, though we pay abundant lip-service to it. Something else must be necessary: something that Comenius and Froebel left out, and we are still leaving out. I write these further notes in the hope of persuading myself that I have some idea what it is.

An indefinite idea is all the better for a rough,

¹ "R.H.C." of *The New Age*.

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preliminary attempt at a definition, and I should define the neglected factor in education, provisionally, as the training of the unconscious mind. There is a certain amount of sense, mixed up with a great deal of rubbish, in the modern quackeries of thought-control by self-suggestion. They do, rather fitfully, make powers available that were not available before, and this for adults who are already (on my present hypothesis) miseducated into a lop-sided reliance upon conscious function alone. But let it be clear that I am not arguing, on any hypothesis, for one function or section of the mind as against another. The essence of education is to develop a balanced harmony of function. If we can find out that we are leaving any essential department of mind-activity undeveloped, it is our business to see to its development in relation to the rest, not to displace any of the proved essentials in its favour. Development of the conscious mind is a proved essential. We cannot have too much of it. But my hypothesis is that this is not enough.

Consciousness is a response to known and recognized stimuli—that is not a definition, but it will serve the purpose in hand. Unconscious mind resolves itself loosely into two divisions which I will call, for the sake of having words of some kind

to use, the subconsciousness and the superconsciousness¹. I will roughly class as subconscious all the habitual reactions of mind that do not need to invade the conscious strata, and as superconscious the non-habitual reactions that lie ahead of the present conscious purview—such as the mathematical ‘instinct’ in boys who have not been taught mathematics. It is an instructive fact that most calculating boys have lost their special faculty on being taught mathematics in the ordinary way. As regards mathematics, teaching has not only failed to educate their superconsciousness, but has thrown it out of commission. I have a suspicion that these rare cases represent an emergence into partial consciousness of superconscious faculty which everyone possesses in some degree, and that we are continually repressing this type of faculty instead of training it as a guide for conscious thought.

The whole course of evolution seems to show the working of some such faculty. Life in itself appears to be characterised by a certain power of unconscious calculation, not in response to known stimuli, that tends to advance its own self-expression.

¹ This term seems to be coming into serious use since I first put it forward—or perhaps there have been other Richmonds in the field.

It is a commonplace of evolutionary thought that civilised man has for all practical purposes come to the end of experimental variation in the physical region, if we except changes in the internal structure of the brain that probably accompany our present mode of variation, which is directed towards the ampler functioning of mind. But when we say 'mind' we do not mean the same thing as when we say 'the mind'; and the distinction may point to the neglected essential in education. Education is satisfied if it develops 'the mind.' It leaves out an all-important function of mind as a whole—this superconscious reaching out for contact with things not consciously realised. Men of genius, great or small, seldom owe anything of their superconscious development to their education, and many of them never fructify till they have succeeded in forgetting their education. Rational method in teaching, now advancing steadily towards general understanding and acceptance, liberates in increasing degree the conscious rational processes; but it may inhibit the superconscious workings even more effectually than the formalism which it replaces. Formalism could stimulate the superconscious mind to healthy revolt; modern method may lead it only too willing a captive.

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To evolve a system of method that would include the training of superconscious faculty, we should have to consider how that type of faculty can best be persuaded to operate in those cases in which it is possible to bring it under observation. Such, for instance, is the case of a writer who is planning out the general structure of a book. He does not, and cannot, as a rule, think it out deliberately; it comes to him, at a sooner or a later stage, as he ploughs on. But he can induce it to come sooner rather than later by deliberately suggesting to himself that it should come, and (this is curious) mentally fixing a time, at a reasonable distance, for its arrival. In the same way, any given chapter 'writes itself,' without conscious planning, if a similar preparatory appeal to the unconscious self is made. It would seem that the superconscious visitant, like any mundane helper, can make and keep an appointment, and prefers to do so whenever an appointment can be made; though willing, it is not always able to respond to an emergency call, and it gets discouraged if its opportunities are left entirely to chance—still more, if conscious interference and worry persistently impede and entangle its plans.

This is an easy and a practical aspect of the very

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complex problem presented to us by the unconscious mind; and I suggest that teachers should try a few simple experiments to discover whether a practical application cannot be found. In my own experience, it has always paid to put before a class the materials for any bit of elementary constructive thinking, and then to leave an interval of a day or two before trying to work out a generalisation. Further, it seems to make a real difference whether the time for this conscious working out of the idea is definitely appointed in advance. Many teachers know that a couple of minutes spent, at the end of one lesson in a subject, in foreshadowing what is to be done at the next lesson, are an uncommonly good investment of time. The foreshadowing process ought to be extended experimentally, and careful records kept of the results. This is a small and practicable beginning for a course of investigation which I believe might carry us far. If education is to mean the liberation of faculty as well as the implanting of information and of habits, it is worth while to see whether we cannot liberate faculty at its source. I suspect that we are still blocking up the source, while we assiduously dig deeper and broader channels to encourage a better flow.

It is not to be expected that the workings of

unconscious constructive imagination in childhood will show immediate evidence of Creative Mind; on the contrary, a great deal of rubbish comes to the surface. And it ought to come to the surface, because then it can be skimmed off. Again, when the skimming process has left a residue of clear thought, this will not be at all the kind of thought that a formalist teacher will welcome. It will be the kind of thought that leads, ultimately, to personal and original views, not to sheepish acceptances. But this is the kind of thinking that we need, and the earlier and the more consistently it is developed the sooner it will find its social bearings—the less likely it will be to become merely anarchic. There is latent anarchism in all of us, underneath a surface of conformity; that is the measure of our lack of liberty. The anarchist has an inner, superconscious sense of something (he cannot define it, or he would not be an anarchist) for which it would be worth while to smash the whole structure of conscious conceptions. He would be a very valuable citizen if that sense of his could have been educated to the pitch of self-expression. And, as I have said, he resides in all of us.

II

ALL educational idealists have a dream of liberating the genie who is bottled up—or so they suspect—in every human individuality. We have seen this genie imaginatively portrayed in many shapes, including the Superman, whom it would be easier to admire than to like, and Ivan the Fool, whom it is easier to like than to admire. These fictional beings appeal to most of us less as ideals than as awful examples. Yet there is something in us that responds to their quality of absoluteness; something analogous to that instinct which, as G. K. Chesterton said, makes all men follow (and worship) anyone who chooses to behave like a king. What we want is a sovereign democracy in which everyone will choose to behave like a king, not like a slave—in which every citizen will be that perfectly intelligible contradiction in terms, a constitutional monarch.

We all hanker after the exercise of the royal prerogative, but we are not trained to its use. Our superconsciousness, which is our kingliness,

does not know its way about its own kingdom. Let me take an instance, to lead up to my present educational point, from the common course of an argument between any two people upon a matter of principle. Each, at the bottom of his heart or the back of his head, wants to promulgate his own view, by royal decree—his own intuition of the truth as his conscious mind has interpreted it. Each has a feeling that logical argument in favour of his view is a kingly condescension to the other, a mark of favour which the other, for some obscure reason, fails to appreciate. Each, in fact, takes up a different *a priori* standpoint, and it is a weariness to listen to them. But each is asserting, under difficulties, a fundamental human right: the right of the seer to his own vision. The exasperating prevalence of *a priori* reasoning is a debased but still a respectable loyalty to inductive thought. The deductive process is the lower process, because there is nothing creative about it, and both our disputants are dimly aware of the fact.

I am impelled here to rush in where the framers of definitions have feared to tread, and to assert that pure inductive thought is, simply, intuitive thought, or superconscious thought. It is not 'the

method of reasoning from particulars to generals' as my dictionary puts it; that is the deductive process following, to check or confirm, the first inductive leap. And I suggest that in education we are leaving the genuinely inductive powers of the human mind entirely unpractised and untrained, leaving them to shift for themselves in a dreamy vagueness, while we concentrate upon the deductive powers which, thus isolated, are slavish and sterile. Our highest flight is occasionally to teach children speculations instead of teaching them to speculate. Can it be that we are afraid of the kingship latent in the human mind, afraid to let the genie out of the bottle? It looks rather like it, but I think the true explanation is not so depressing.

Creative thought, or the reaching out to come into touch with original Truth (though I think that the 'or' is a mistake, and that we ought to combine both the philosophies here implied), is inherited through an evolution which has included very little civilised and semi-civilised life, and a great deal of mere struggle for existence. It is not only true that the Thinker, for some hundreds of centuries, was perpetually obliged to stop thinking and climb up a tree to get out of the way of a tiger; ninety-nine

hundredths of us, to-day, have to stop thinking in order to earn money, and a good many of us have had to stop thinking in order to go and fight Germans. The tiger, in one shape or another, is still on hand. It is not so much a fear as a long-evolved, habitual instinct of sound precaution that makes us careful how we lose ourselves in superconscious daydreams. But we make a large mistake if we trust quite blindly to that instinct. It is tending to become an instinct for inhibiting the highest workings of mind, not for safeguarding in a reasonable way the organism upon which the mind depends; and to do this is to turn man into a mollusc. Our further evolution, if it is not to run into a blind alley like that of the molluscs, depends, as all evolution has always depended, upon a continued superconscious reaching out. The question is how to develop the power of reaching out without, in the meantime, leaving the organism the prey of miscellaneous tigers.

But we are in danger of a false opposition between the Thinker and the Struggler-for-Existence. They are the same person; and the thought and the struggle are, or should be, part of the same evolution. The thought is, as we have just been

observing, absolutely necessary to the struggle. We have to discover how the thought and the struggle can go on harmoniously. It is not the right solution to inhibit the thought.

The problem is only capable of haphazard solution as we are going on at present. We think a bit—if we do think—and then we struggle a bit; and the two activities get into whatever working co-ordination they can. Meanwhile, we have an institution called education, of which the general idea is that the young are absolved from the struggle and protected from the tigers so that they may learn to think fruitfully and usefully. It is here, if anywhere, that the Thinker can find his bearings; and it is here, at present, that the Thinker is consistently and conscientiously starved. The Learner may be pampered; but he is a nonentity without the inspiration of the Thinker.

This Thinker, it will be clear, is the exponent of inductive, not merely of deductive, mind: the superconsciousness in practical operation, the worker of creative miracles that come off. He must be trained for his position of regal citizenship, not left to become a malcontent and an anarchist; but (I can imagine the reader asking, with very pardonable impatience) what is the process to be? It is

here that I must confess myself to be merely feeling, with my uneducated superconsciousness, for a solution. I know that there is a solution, if we can get hold of it. But it depends to a very great extent, not upon theorising (far be it from me to thrust a new Superman upon an unwilling world), but upon practical experiment in teaching. I can offer only tentative suggestions. I suggested, in the last section, some kind of systematic experimentation to determine the value of a fallow period between the presentation of a group of ideas and the emergence of the child's fundamental thoughts about them; this is a genuine and a practical value, as I know by experience, but it calls for careful investigation by many workers, and for much discussion and interchange of opinion. I will offer another suggestion for the development of the inductive mind.

We are always repressing the *a priori* element in children's thinking, always saying to them, 'don't guess,' and 'stick to the facts.' If I am right in the idea that the apparent intellectual vice of *a priori* reasoning is only a rudimentary and undeveloped virtue, we have another argument for encouraging guess-work instead of repressing it. As I remarked in Chapter III, we have begun to

do something of the kind in mathematical teaching, when we encourage the guessing of a preliminary, approximate solution of a problem. A boy who possesses the mathematical 'instinct' occasionally, but too often for coincidence, hits on exactly the right answer without conscious thought. I knew a boy who discovered for himself, in this way, how to solve quadratic equations. The mathematical prodigy, like Dase or Gauss, would 'guess' all his problems correctly; might not the ordinary mortal, with practice, learn to guess, or to use his superconscious mathematical sense, with increasing correctness? My own data point strongly to this conclusion. And I have found that the deductive or analytical process, when it is used to follow up such preliminary guesswork and to check its conclusions, is very much better understood than when it is taught as the only process. Mathematics, the most rigid form of thought, furnishes the easiest example; but the same principle of constructive guesswork can be applied with advantage to every kind of teaching. We have scarcely begun to discover the powers of the superconscious Thinker; and it still remains to consider what can be made of him as a citizen, not merely as a mathematician.

III

THERE is a definite gap between the conscious and the superconscious workings of the civilised mind; the hiatus between educational practice and the intuitions of the great educators is only a special case of it; and the more highly educated the individual, as a rule, the wider this gap is found to be. It is less marked, however, in educated people who have developed their artistic as well as their intellectual side. An artist is often a much sounder speculative philosopher than is a trained expert in metaphysics. He has had some practice in using his intuitions. This fact suggests a value for artistic training in schools beyond the mere production of an arty and crafty attitude of mind, and I shall have to make a guess, presently, at one or two unrealised possibilities that seem to be latent in the teaching of art; but first we have the task of trying to understand more clearly what is the nature of the gap that has to be bridged, by artistic training among other things, between the two functions of mind with which we are concerned—call

them conscious and superconscious, deductive and inductive, intellectual and intuitive, or what you will. It may be useful to consider the more elementary phases of the human mind, in which the gap is less evident and the two functions merge into one another, so that we may see what is the natural unity from which the two have diverged into an unnatural opposition.

Our first attempts at universal education are rapidly doing away with a certain type of peasant-wisdom, best distinguished, perhaps, by the word 'lore.' There is a fascination, beyond the interest that attaches to all types when they are vanishing, about the remaining possessors of this kind of wisdom. I remember an entirely illiterate old gardener, very weather-wise, whose invariable success with his garden was more like the operation of a force of Nature than the working of a human will. The garden was a miracle of apparently planless organisation and efficiency. It is not particularly easy, with the most careful planning, to keep a succession of flowers and vegetables going all through the year; he did it all 'by instinct' and infallibly. He measured nothing, labelled nothing, and expounded, under inquiry, a system of gardening that was less a science than a

mythology; but he produced exactly the results of the best modern scientific gardening, with something superadded—the fact that his garden was a place where one could think. It felt natural, not regimented. The reader will probably recall similar instances.¹ Now, the point I want to make is that this old man was creative in his work, and that the modern scientific gardener is, as a rule, not creative. Our tendency is to put the science of gardening in place of the art of gardening. Mechanically, it works just about as well, and it has the real advantage of being communicable in words; but lore disappears, creative enjoyment disappears, and something distressing happens to the garden in the hands of the new man. This garden is turning into a symbol; I will leave it at that, for the moment.

Let us turn, for another primitive type, from the peasant to the young child. When a child first begins to talk fluently, he becomes the very Genius of Utterance in primitive form. Words flow through him; he does not construct and qualify, he talks. Interrupt his flow of unthinking talk with a question, and he becomes a different person, a person who has to think before he speaks, a halting stammerer. A

¹ Cf. "Snarley Bob," in L. P. Jacks's *Mad Shepherds*.

small boy watched his father writing, and announced that he was going to write, too. Grasping the pencil that was given to him firmly in his left hand, he scribbled industriously across his paper from right to left, at the same time speaking aloud the sentences which he was pretending to write. They took the form of a letter, and were so good that the father offered to take down the letter and send it, if the child would start afresh. The boy was delighted at the prospect, opened his mouth to dictate—and could not say a word. He was as much disappointed as his father, but, with the best will in the world, the stream could not be induced to flow through the channel of his fully conscious mind. The current was outside the range of his conscious intellectual co-ordinations. Have not all of us had similar experiences upon a larger scale, in the flow of enlightening ideas that sweeps through us during meditation, only to dry up, or dwindle to the merest trickle, as soon as we try to say or to write down what we have been thinking?

The letter of which the small boy was thinking (and, fortunately for our example, thinking aloud) represents, in embryo form, our superconscious inspiration; the abortive attempt to dictate the letter represents our fumbling efforts to catch the

inspiration. There must be something wrong about the reflex inhibition, the involuntary clenching of the conscious intellect, which continually denies us the full possession of our own best thoughts. This study that I am writing might seem a marvel of psychological and philosophical insight if only I could get a firm grasp of what is going on at the back of my mind. The question is whether we could not have been educated to grasp where we now grope. As I have said, I believe that there is an unexplored region of educational method, corresponding with the unexplored gap in the human mind. But it is in the nature of the case that its discovery can only come about gradually, and at first by groping. There is not likely to be a single short cut to discovery, and the best we can do is to trace such converging paths as we can find.

Perhaps there are indications of a path in the example of the little boy and his letter. Suppose that the father, instead of interrupting the child's flow of thought, had quietly taken down what he was saying, and had read the letter through to him afterwards. This would be a single and a simple first stage—the sowing of the suggestion in the child's mind that his thoughts were worth giving to someone else, without as yet making any call for the

complex effort necessary to direct the stream of thought to that purpose. Then the experiment could be repeated, the child, every time he played at writing a letter, becoming a little more consciously aware of outward expression while still immersed in his own thought. After a time the pencil scribbling could be dispensed with as no longer necessary to the game, since the reality was in the writing done by the amanuensis. I imagine that the child would by this time be dictating unusually good letters for his age. Later, he would want to be his own amanuensis, and would have a motive for learning to write—and, having learnt, would have some flow of expressible thought to urge on his pen.

Fathers have not usually the time or the patience to play the part of the elder Karl Witte; but mothers, and nurses of the more intelligent type now happily becoming frequent, could devise some such methods as this, starting from any of the child's spontaneous activities that show the thought-stream bubbling up into utterance. (I say 'devise'; it is impossible to teach without taking thought, and the people who want rule-of-thumb methods provided for them are the people who misapply rule of thumb when they have learnt it.) The main point is to accustom the child, from small beginnings, to the process of

running his superconsciousness and his consciousness in double harness. It is the beginnings that are the most important, and it is in the nursery that the two are first taught, in our usual practice, to pull in opposite directions—hence the modern tendency to throw up the sponge and not try to educate young children at all. What I am suggesting is only a type of nursery method, and a method that is only directed to the setting-up of a connexion between thought and words; this, however, is an important enough connexion, and it is largely made, and usually very ill made, in the earliest years. We shall have to search further for a hint of the right connexion between thought and acts: the development of conscious knowing-how without the abandonment of lore. We must certainly have the inspired gardener of the past surviving in the scientific gardener of the future, or we shall have a garden in which no one cares to walk.

IV

WHATEVER the superconscious mind is, and how-
ever it functions—questions for which only the most
conjectural answers can be suggested until a great
deal more experimental work has been carried out
—there is no doubt that its connexions with the
conscious mind are very imperfect. The nearest
approach to systematic work for the study of these
connexions is to be found in the researches of
Freud and his school.¹ Freud is a doctor, more
interested in disease than in health, and his medical
practice has led him to deal adequately with the
superconscious mind only in its phases of morbid
disintegration. In these phases, it appears as the
enemy of sanity. The other side of Freud's psychol-
ogy, the side hitherto neglected, would take into
account the normal workings of the superconscious
mind, the phenomena that we roughly lump to-
gether under the heading of genius. The side that

¹I ought also to mention the radical departures from the
Freudian system now being developed by Jung and the Swiss
school, although they bring us to no distinct educational
doctrine as yet: Jung's investigation of the teleological un-
conscious promises great things.

the psychoanalysts have so far worked out carries a warning, however, against the dangers of denying to the superconscious mind its proper development and expression. Our superconsciousness is the Ireland of our mental body politic.

Freud's conception of a 'censor,' residing in the borderland between the conscious and the unconscious regions, and protecting the orderly consciousness from being upset by the promptings of the anarchist beyond, may help us in our present search for a method of investigation. This 'censor' is not only an inhibitive agent. I rather think that Freud has been careful not to commit himself to the hypothesis of an absolute distinction between the 'censor' and the 'dream mind'; but I believe that I am departing from his system, rather than extending it, when I suggest that these two represent different operations of the same stratum of mind. I should say that this stratum of mind acts alternatively as censor and as interpreter, the two functions shading off into one another. The nonsensical dream, symbolising a thought or a wish or a worry that is thus kept from conscious realisation, is obviously an interpretation that is equivalent to a censorship. But there are dreams

that reveal, rather than obscure, the thought. And the dream mind can be trained to interpret intelligibly; R. L. Stevenson's is the classic case, but, apparently, anyone who is in the habit of dreaming (or of remembering his dreams) can learn to dream coherently, and even usefully, by practice and self-suggestion. I know that this is so in my own case.

It would seem that the dream mind is only a special instance of the working of a semi-conscious, interpretative region of the mind. Its action shades off into the mind-action that produces poetic imagery: the transition is slight from an actual dream to 'Kubla Khan.' We are here upon a line of thought which would suggest that the 'censor' can become, with training, the interpreter of the superconscious mind. There is no doubt that the poetic faculty, like all the artistic faculties, can be educated, though our ideas as to the method to be pursued are extremely hazy. It might also seem that the education of the superconscious Thinker means simply and solely the training of the semi-conscious Interpreter—the increasing establishment of the connexions, the means of communication, between the conscious and the superconscious mind. But I do not think this is the whole truth. Perhaps it is better to say that we can

educate the Interpreter, and, by doing so, can give the Thinker a chance to educate himself. I make no apology for these personifications. We are irrevocably committed to an anthropomorphic conception of man, and there is no reason why the conscious fraction of self should alone be credited with a personality.

I have already suggested that a better training of the artistic faculties ought to produce, not only better artists and appreciators of art, but a humanity better able to use its superconsciousness. It is instructive that in the time of the Gothic, when training in art and craftsmanship was probably more genuine and more general than in any other period of known history, buildings were produced which were not only miracles of art but miracles of engineering. It is impossible not to conclude that the extraordinarily complex strains and stresses of Gothic architecture were superconsciously worked out. That there was a certain amount of trial and error we know by the records. Every now and then a piece of vaulting would collapse. (Here, on my hypothesis, the Interpreter was for once at fault.) But on a system of trial and error alone the cathedrals would have done hardly anything but tumble down.

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Mediæval artistry and craftsmanship were not, of course, developed under the conditions of the class-room or the art school, but under a system of practical apprenticeship. It is very difficult to train the artistic faculties to any purpose by the existing methods of class teaching. A method that combined class teaching with guild apprenticeship would give us a better chance¹; we should not be teaching art in the air, as we are obliged to do at present. But our present ineffective teaching of art (what there is of it) might be made more effective by paying attention to the functions of the Interpreter and trying to determine how he can most easily learn his work. I have done little more, myself, than to cut instruction down to a minimum, and to try to give as free play as possible to the unconscious minds of children. The experiment of reading aloud to a class that was engaged in producing a series of water-colour drawings in connexion with nature study was a distinct success; the usual clumsy deliberateness to a great extent disappeared, and the drawings, in the opinion of

¹ Plans to connect schooling with apprenticeship are already coming to practical focus: cf. Report of the Committee appointed by the Council of the North East Coast Institution of Engineers and Shipbuilders (June, 1917), for a scheme of education for apprentices that would give some chance of emergence to mechanical and industrial genius.

independent judges who were not told the circumstances, were both more accurate and more alive than those produced with more direct concentration. (One remembers that Mozart liked to be read to while he was composing—or, perhaps, only scoring music that was already sketched, as is the case with a modern composer of my acquaintance.) This distraction of a certain amount of the conscious attention seems to be distinctly useful in giving the superconscious attention a chance to emerge.

Conversely, when the conscious attention is wanted, it is a good thing to give the dream mind something to play with. Children attend very much better to a lecture lesson if they are allowed to scribble and draw aimless diagrams on spare scraps of paper than if their natural impulse to fidget is always inhibited.

The whole question of inhibitions needs to be experimentally studied in the detail of class teaching. All fear-inhibitions are bad; apart from their effect upon the character, they tie the mental faculties into knots. Yet we are continually teaching children to be afraid: afraid of making mistakes (which they consequently make, just as a bicyclist runs over a stone if he is afraid of running over it), afraid of our opinion and each other's

—afraid even of their own. In the region of artistic education at least—such artistic education as we have begun to provide—the most timid teacher can dare an attempt to remove these inhibitions and to give superconscious faculty a chance to work its way through. But there are inhibitions of another class, which do not so much dam up the superconscious stream as hold the channel open for its passage. It will be more appropriate to speak of these in connexion with the social possibilities of the Thinker, which involve the paradox of freedom and fellowship; for the present I will only throw out the preliminary suggestion that, as the wrong inhibitions are the inhibitions of fear, so the right inhibitions are those of fellowship.

V

ACCORDING to the psychology which I have been endeavouring to trace, the social unit—call him Jones—has three more or less interrelated personalities: his superconsciousness, or the super-Jones, who is not yet a citizen; his subconsciousness, or the sub-Jones, a being of purely reflex reactions who constitutes from 90 to 99 per cent. of Jones the citizen; and his ordinary consciousness, or the middle Jones, the Jones-who-knows-what-he-is-doing, whose occasional and partial functioning as a citizen is represented by the remaining 1 to 10 per cent. It is commonly thought that we need only educate the middle Jones to claim a fuller franchise if we want a reformed social order; I am suggesting that the new age will not begin till we have enfranchised the super-Jones. But I have little doubt that the middle Jones will have to keep a check upon the proceedings of the sub-Jones before the super-Jones will have much of a chance.

For one thing, the sub-Jones is a mechanist,

because he is a machine. He is the product of evolution and habit alone, and he naturally distrusts and dislikes the super-Jones, who is a vitalist; and having the middle Jones almost entirely under his thumb he can generally manage to keep him within the closed circle from which the super-Jones would have him break free. It is a partial reply to a question which my critic propounded, as to the possibility of self-training by adults, to suggest that the middle Jones should take the sub-Jones in hand; or, in other words, that Jones should examine his habits, and make up his conscious mind which of them really represent the kind of person he wants to be. This calling of the sub-Jones to account often results in an emergence of the super-Jones. The process is known in religious terminology as repentance, and religious people (of whom there are very few) treat it as an act of realism, not of emotional self-dramatisation.

The establishment of a constitutional check upon the authority of the sub-Jones, who is a capable Minister of the Interior, but an intolerable tyrant when he usurps power over the wider empire of mind, ought, however, to be seen to in childhood. Here is an answer to another of my critic's inquiries: whether children can be led to take an interest in

abstract ideas, as such. In my experience of teaching, children not only take an interest in 'abstract' ideas, but it is impossible to get them to take an interest in anything else. All the natural play-activities of childhood are matters of symbol and abstraction. To the average child, everything represents an abstract idea except his lessons, which do not represent any idea at all. Among other things, a child has the power of abstracting himself from his conduct and looking at his own behaviour from an impersonal point of view. He is able, without the least egoism, to take an intense interest in himself as a being who does curious and inexplicable things. This is the young super-Jones prompting an investigation of the manners and customs of the young sub-Jones. We ought to encourage this investigation by every means in our power; the child is always asking inarticulately for our help in understanding the curious automaton which he finds himself inhabiting. The root mistake is to regard his tearful repudiation of the automaton's doings when they are 'naughty' as an attempt to evade his responsibilities. The whole conception of 'naughty,' which sweeps over a child's mind with such desolating effect, is a taboo, a blind inhibition, an insuperable

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bar to understanding. You can train a child's character by sharing with him an impersonal, scientific interest in his behaviour, and by joining with him in an investigation of his impulses; or you can supply him with a bundle of inhibitions, chiefly for the purpose of concealment, by setting up an arbitrary and unexplained standard of good and naughty. It is by the latter process that his super-self is paralysed, and his sub-self raised to the position of a crafty and hypocritical Prime Minister.

I spoke in the last section of the right inhibitions which are the inhibitions of fellowship, as distinct from the inhibitions of fear. These right inhibitions spring naturally from the impersonal consideration of behaviour, and of conduct which is the social aspect of behaviour. They might be defined as the constitutional laws for keeping the sub-self in its proper place. The right inhibitions control the sub-self; the wrong inhibitions limit the super-self. This statement, I am pleased to observe, brings us to a platitude. It is always a pleasure, in the search for a truth, to pass the friendly landmark of a truism. Truisms, such as this of the better and the baser self, are expressions of the superconscious sense of mankind, though in a currency that is worn

smooth with use. It would be a very suspicious symptom if the psychology of the superconscious were to land us in a new morality, unless in the sense that the new is a re-interpretation of the old.

If we are on the track of a re-interpretation, it lies in this notion of the sub-self, the product of material evolution, as the Old Adam who has to be kept in order. And the method I suggest for keeping him in order is the deliberate and dispassionate investigation of his character and tendencies. This kind of scientific self-examination does not lead to introspectiveness; it is rather the antidote to introspectiveness. The more intense the interest anyone takes in himself the better, if it is an impersonal interest, and if he can learn to see himself whole—that is, if he can learn to see himself in relation to other people. Self-consciousness comes from ignorance, not from knowledge, of self. It is an alarmed wondering what one's self will do next.

Moral science, then, ought not to be only a subject for a Tripos examination; it ought to begin as a nursery game. There is a great deal of sense in the practice of personifying a child's sub-self and giving it a name; a small boy of my acquaintance knows his sub-self as 'Algy,' and can describe

the characteristics of Algy with much psychological insight. Also he can generally keep Algy in order; and when he cannot, he knows how to ask for advice. It is more difficult to explain to the adult, Jones, how he can get the better of the sub-Jones. The sub-Jones has been entrenching himself for years; he has had the guile to take to himself, as hostages, many of the symbols of liberty. It is as long and laborious a business to unravel his pretensions and show them up as it is to untie, by Freud's psycho-analytic methods, the knot that causes a phobia or other hysteric symptom. But a good deal can be done by keeping an eye upon one's own reflex processes. Much of modern realism is an attempt to carry out this examination in objectified form; and much of modern pessimism is the resultant hasty conclusion that the sub-Jones so revealed is the whole Jones.

I have been pursuing negative methods in these last two sections, and saying very little, directly, about the functions of the super-self. Before devoting a final effort to the Thinker himself, I will sum up the two main conclusions that seem to have emerged so far. They are, first, that we must train the Interpreter if we are to have any chance of catching the Thinker's meaning, and second, that

we must establish an understanding control of the sub-self if it is not to inhibit our higher functioning. The first conclusion means that we have to educate the artistic faculties if we want to develop a complete human being, a sovereign citizen. It probably means a good deal more than this, but the first step is to evolve a type of art training that aims at giving increasing self-expression to the intuitions. This does not imply merely the holding of art classes, but an endeavour to teach every subject as an art in its degree. The second conclusion means that we have to educate the consciousness to understand the subconsciousness, or, in other words, that we must get morals out of the region of taboo, study reflex behaviour as a thing that happens, and help children to work out the reasons why it happens. Until we do this, the sub-Jones will continue to usurp supreme power in the actual working of civilisation.

VI

My critic asked another question as to the possibility of developing 'faculties at present scarcely worth the name' by learning how to educate the super-self. This lures me into a still more conjectural region. If we are going to speculate about the future, it is always as well to reach forward with one hand only, while feeling back with the other as far as possible into the past; to try to attain, for a moment, the sense that past, present and future are one. This sense, really an emergence of the super-self, can be intensified by practice in meditation, as most of the mystics knew; and in greater or less degree it seems to be implicit in all constructive thinking, whether or not the thinker is aware of the fact. Our sovereign citizen must be something of a visionary, if he is to be anything of a sovereign. Perhaps he will begin to develop some power of historical vision when we begin to teach history, not by 'periods,' but by vistas.

There is a common term to be found in the three main types of the emerging super-self: artistic

genius, intellectual genius, as found either in the engineer or in the philosopher, and moral genius. Each is a kind of mediumship. I am not going to enter here upon a discussion of mediumship as it is understood, or misunderstood as the case may be, by spiritualists; but the genius of every type is familiar with the impression that he is being used, in moments of semi-conscious exaltation, as the vehicle for something not himself, and very much greater than himself. According to the psychology that we have been tracing, this something is his super-self; and it is not surprising that the super-self, which enters so little into the ordinary phases of consciousness, should give the impression of a personality distinct from, and greater than, one's own. But there is probably more in it than this. Our hypothesis of a super-self carries with it certain necessary implications.

If we have an upper personality as much superior to our ordinary, conscious self as that conscious self is to the bundle of reflex tendencies which make up the subconscious self, it is to be expected that the former superiority should be similar in its nature to the latter superiority. If we cast about for a single term in which to express the superiority of Jones-who-knows-what-he-is-doing over the sub-

R

Jones—the Jones who scowls when somebody else comes into “his” railway carriage—I think we shall find that the difference is best summed up as a matter of fellowship. The conscious Jones is the more social. He has become the conscious Jones, the semi-civilized Jones of the present day, in virtue of the fact that his ancestors have painfully evolved a rudimentary social consciousness. It may be noted here that, historically, the conscious Jones of to-day was the super-Jones of savage life; and that the sub-Jones of to-day, scowling, in the corner of his railway carriage, at the new-comer (with whom, we will hope, the conscious Jones will soon start a friendly conversation about the weather and the crops) was the conscious personality of the cave-man.

We can infer, then, that our super-self is as much more social than our conscious self as our conscious self is more social than our sub-self. We can do more than infer it; it is a fact of experience. Any great and memorable talk between friends is characterised by two main features: a sense of the emergence of the super-self, and a sense that fellowship is raised to an unusual pitch of intensity. Each of the talkers has the rare and delightful feeling that he understands everything; but it

is a condition of this feeling that he should have the sense of understanding the souls of his interlocutors. The implication which is involved in the whole idea of a super-self is that it is, literally and quantitatively, *more* than the conscious self, in virtue of its essential union with other super-selves. What the psychological mechanism of this union may be we have not yet the data to determine; it may be a kind of super-telepathy. That would account for the 'spirit-of-the-age' phenomenon: the extraordinary concordance of work done in similar fields by thinkers who are not in communication with one another. But it would not account for everything. It would not account for the sense that there is a reservoir of pure truth upon which the super-self can draw (subject, however, to the sophistications and glosses of the Interpreter, and to the fixed ideas and prejudices of the conscious mind). I should not like to shut the door upon any hypothesis. Possibly psychical research, in its extreme infancy at present, may eventually lead to a scientific re-interpretation of the communion of saints. If any impatient Christian wants to know why I am leaving divine inspiration out of account, I will explain that I am doing nothing of the kind. I am trying to find out how it works.

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The ancient Jews must have made some study of the means for inducing inspiration, in their 'schools of the prophets.' The results were certainly remarkable, when we consider the heights to which a Jewish prophet could rise above the prevailing views and ethics of his time. Shall we ever have a School of Experimental Prophecy established at each of the universities? The idea ought not to seem as ludicrous as it undoubtedly does seem. But the worst of highly differentiated seers is that they leave the common run of people behind. We need to start at the bottom: every school ought to be a school of the prophets. Then, perhaps, we should have not only inspired thinkers, but a public that would attend to them, just as in the days of mediæval craftsmanship there was not only great art but a people who could appreciate it. In fact, it is the one hope for a new age that we may be able to democratise inspiration. Otherwise there are only two alternatives: the occasional prophet will speak to the void, and be gathered to his fathers, while humanity continues to muddle through (more muddle than through); or the prophet will try to talk down to the multitude, and lose himself in the labyrinth of the popular sub-self, and become a false prophet. That must have been the

fate of the enormous majority of seers, artists, and thinkers all through the ages.

We must experiment, systematically and patiently, if we are to find out how the faculty of inspiration can be developed—or, rather, how the conscious self can be induced to give adequate interpretation to the super-self. The faculty of inspiration, I am convinced, is there already; we dream greater things than we know; but we forget our dreams, or suppress them, or sentimentalise them. The vision of a new order, coherent and complete, which we sometimes carry through from sleep, if only it would not fade, if only we were trained to seize it and translate it into the language of daylight, would transform civilisation. But it must be everybody's vision, or it may just as well be nobody's vision. We need a clairvoyant democracy. Is that a *reductio ad absurdum* of my thesis, or a suggestion that there is a cure for the disease of the world? I have an idea, sometimes, that young children know perfectly well what is the matter with the world, and could grow up to tell us what the trouble is, if only we could let them develop the right power of expression. But we must train ourselves, too, to co-operate with them, and to remember our dreams.



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